University of Alberta

Bio-Cultural Discourses of Assisted Conception

Perspectives from Anthropology

by

Constance Elizabeth Sylvia MacIntosh ©

A thesis submitted to the Faculty of Graduate Studies and Research in Partial fulfillment of the requirements for the degree of Master of Arts.

Department of Anthropology

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Abstract

The utility of anthropological perspectives in understanding current assisted conception and associated biotechnology debates in Canada, Britain and the United States is made clear through this thesis. I draw upon public media sources plus parliamentary and legislative records and decisions, as they provide codified manifestations of cultural values and beliefs. Analytic themes include: how realms of authority are negotiated in determining which people and whose interests come to 'count' in these debates; how legislative bodies or others in positions of authority sanction social change associated with the new reproductive technologies; the interplay and differential privileging of social vs. biological 'facts'; and how technologically created 'natural facts' are culturally normalized. Chapters focus upon: current and historic discourses regarding artificial insemination; in vitro fertilization, as debated primarily within academic circles; and the cultural liminality of the out-of-body embryo as both and neither person or property.

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Chapter One: Introduction

Arguably, assisted reproductive technologies are first and foremost 'body technologies'. They are interventionist practices deployed upon and using material from human bodies to try to produce other human bodies, with the formal 'assistance' of a third (or fourth) party who assumes no kin role in the subsequent family unit. This thesis is itself a demonstration of and thus argument for the utility of anthropologically informed research and perspectives in understanding and so responding to such phenomena. As such, I both implicitly and explicitly argue there to be an important role for culturally situated studies in developing responsible social policy in such areas as biotechnology. To make this argument, it is important to first situate anthropology as a discipline with a history that can validate such a role. That is, a history which lends credence to the expectation that anthropologists can contribute something valuable and unique for understanding the cultural positionality of such 'body technologies' as artificial insemination or *in vitro* fertilization.

To this end, this introductory chapter is offered as a general history, or pedigree, of some of the roles or meanings ascribed to the body in the work of anthropologists, as well as an introduction to some of the approaches taken within current medical anthropology research. Medical anthropology is the anthropological specialization from which I expect to be able to contribute to understandings of assisted reproductive practices. This chapter briefly chronicles body literature from early cultural anthropology traditions - where the focus was largely the violation of Western cultural body boundaries in the cultural practices of non-Western peoples - to the contemporary research of medical anthropologists, many of whom take the deconstruction or contestation of biomedical knowing, especially of the body, as their focus.

The chapter culminates by describing my research interest in the controversies surrounding assisted reproduction, and the manner in which I will discuss the culturally situated issues which I see as relevant for understanding the public, parliamentary and legislative responses to the controversies. I pay particular attention to parliamentary and legislative records and decisions, as they provide codified manifestations of cultural values and beliefs. They also must stand up to public scrutiny. The research area itself is introduced by positioning it within current anthropological research trends, as well as describing its variance from those trends.

Staking Claims: The Body Work of Anthropologists

Many times since commencing my research I have encountered written assertions to the effect that anthropology, unlike other social sciences, has a considerable history of according the human body a central place in its studies. Such statements, though made frequently, are not to be found in many anthropology texts. Rather, they lurk in the introductory remarks of several recently published sociology texts (e.g. Richard Fox 1992; Shilling 1994; Turner 1991; Frank 1991). Within these texts, the authors present arguments for the study of the body and related social issues as constituting areas for sociological inquiry, all the while looking to anthropological writings for reference to frame their proposed approaches. Sociology has only recently begun to give such comprehensive attention to this topic - the sociologist Synnott argues that although sociology has for some time studied certain attributes of the body (e.g. colour in race relations, age in gerontology, gender in sex roles) (1993: 4), that the first true attempt to develop a comprehensive sociological approach to the body is attributable to Bryan Turner, with his 1984 text The Body and Society (1993:236).

The anthropological tradition of approaching the body as a cultural fulcrum is considerably older and quite well established as a legitimate area of study, although the tips of its roots are buried in the rather politically dubious colonial practices of Victorian England[1]. To speak somewhat broadly, cultural anthropologists have, both historically and in the present, examined the body in terms of such issues as what peoples will or will not do with it (ritually or publicly), as well as how peoples understand, define, and talk about it. Much work, as is discussed below, has considered the rather complicated dialectical relationship between cultural beliefs and knowledge systems, and experiences of corporeality. Such work looks to the corporeal reification and thus naturalization of socio-cultural beliefs about how things 'really' are, commonly postulating that ideas of the body form a template for classificatory systems (cf. Ngubane 1977; Martin 1990).

This anthropological exploration, of corporeal reification and sociocultural beliefs, has in some cases focused upon how body/non-body (and by extension self/non-self or entity/non-entity) boundaries can be seen to be drawn and maintained or violated. Such work may consider the sociocultural role which these postulated boundaries can be argued to play. Mary Douglas' Purity and Danger: an Analysis of Concepts of Pollution and Taboo (1966) and Natural Symbols: Explorations in Cosmology (1973) are both solid and well-known examples of this tradition.

---

[1] Extremely interesting discussions - complete with visually repugnant scientistic drawings - of the role that anthropological research on the bodies of exotic others took in the Victorian period can be found through many sources. My two favorites are Stephen Jay Gould's The Mismeasure of Man (1981) and Jean and John Comaroffs' Ethnography and the Historical Imagination (1991).

In each of the above texts, Mary Douglas' analysis of sociocultural taboos and notions of purity positions the body and bodily experiences as being the principle medium of classification for (human) cultural systems, as "the basic theme for all symbolism" (1966:164). She argues explicitly within Purity and Danger that the body provides a model - or a set of "natural symbols" - for knowing ordered categories, which in turn serve both to explain the experience of social disorder and to guide the restoration of social order (1966:115, 122). The relationship is an analogous one, in which tight social boundaries would be reflected in tight corporeal boundaries, and a society's cultural values and practices could be investigated through a discursive analysis of the society's body metaphors.

Douglas develops this position further in Natural Symbols by taking there to be two 'bodies', self and society. Society as a whole forms a 'social body' while nature 'gives' each person an individual 'physical body'. Each culture selects or derives certain symbols from the repertoire offered by the 'natural body' as carrying a social meaning, that is, to form or structure the 'social body' (cf. Synnott 1993: 230). Regardless of Douglas' cross-cultural examples, or perhaps because she sees so many, she demonstrates nothing more clearly than the fact that the body is positioned by *Western thought* as a naturalized, or *naturalizing*, foundation for knowledge. I argue in chapter four that this premise is one of the problematizing aspects of assisted reproduction, especially when technologically created 'natural facts' conflict with biologically derived 'natural facts', as exampled in technologically enabled kinship relations.

What are taken as reified manifestation(s) of body boundaries (as well as their discourses and politics) have also been explored by anthropologists in terms of specific cultural practices such as tattooing, piercing, male and female circumcision, birth and death recognition practices, spirit possession, etc.. These areas are touched upon both in the work of 'classic' anthropologists who are contemporaries of Mary Douglas such as Levi-Strauss (1963; 1969) or Victor Turner (1967) as well as by a younger generation of anthropologists, as is demonstrated in the myriad of articles collected by Katherine Young (1993) for an anthology entitled Bodylore.

Young's contributing authors cover 'body topics' ranging from the ritual application of intricate henna designs to the bodies of Moroccan brides in the process of their becoming social adults (Kapchan), to the cultural discourses of Luxoran people in Upper Egypt in which the body and soul of holy people can be totally disconnected entities, allowing for the soul to re-incorporate itself in multiple places simultaneously (Wickett).

It is in part out of such anthropological explorations, which took the body as an universal foundation for human knowing and cultural construction, that there has emerged the subfield known as medical anthropology[2]. Work within this subfield usually explores cross-cultural ideas and practices of health, healing, and illness. This exploration often takes as a focus the roles and experiences ascribed to the body, as well as the social and political bodily-based discourses of health.

---

[2] Medical anthropology also has roots which can be followed to or from such areas as physical anthropology, ethnomedicine, the culture and personality school, and public health work (as historically supported by institutions such as the World Health Organization and the Rockefeller Foundation). For my purposes, however, it is sufficient to acknowledge these areas as background context, as they will not significantly inform my discussion. Overviews of the field which do discuss these 'roots' include the introductory chapters of Foster and Anderson (1978), and Johnson and Sargent (1990).

Medical Anthropology; Body as Academic Territory

Much of the contemporary research by cultural anthropologists focusing upon the human body falls into the general category of medical anthropology. A common theme for such explorations is the contestation over the validity of, or the positive demonstration of, definitions of health and illness as they have come to be inscribed upon, known through, or otherwise 'proven' by the body. The body is thus taken as a pivotal and foundational cultural signifier, an already familiar role for the body in anthropology. However, it is new in-so-far as this analysis is often used upon the biomedical system, with its bodily-derived truths being questioned and resituated within the context of the cultural system that has spawned it (Lock 1993: 136).

The approaches and premises of medical anthropology researchers have diversified somewhat since around the early 1980s. Before this time, much medical anthropological work predominantly followed what I isolate to be one of two rather predictable formulas, described below. Although there is, of course, important variation from these approaches, I believe there are some legitimate and easily identifiable trends existing within the literature. In both of these formulas, the body is usually understood as being a-cultural. That it, it is essentialized as a tangible object which is fully knowable through a systematic approach - through there is some contention as to what epistemological method or medical system is best able to know the body.

Formula One: Traditional Versus Biomedical Knowledge Systems

In what I isolate as the first 'formula', the anthropologist would typically contrast biomedicine with a 'traditional' medical system, as Horacio Fabrega and Daniel Silver do in their well-known comparative account of Zinacanteco and biomedical healing (1973). The traditional system in such cases would be demonstrated to have a far more holistic and humanistic approach than biomedicine. This holism would be expressed or described not only in terms of mind-body conceptualization, but also social and political integration, etc. Biomedicine, on the other hand, would be demonstrated to be reductionistic, mechanistic, and de-humanizing.

It is also typical of this approach, as is the case with Silver and Fabrega (1973), that each of the two named medical systems would be argued to demonstrate greater efficacy at opposite ends of a rather polemical conceptual continuum; a continuum which is itself informed, or predetermined, by biomedical categories. The biomedical practices would be argued to better heal acute disorders, while the 'traditional' medical practice examined would be argued to better alleviate chronic disorders.

This approach also underlies much of George Foster and Barbara Anderson's 1978 well-known text, Medical Anthropology, which purports to describe the current state of the field at the time of its publication. In this seminal text, the authors continuously contrast the reductionism of biomedical practices with the holism of "many non-Western societies", in which "the dividing lines between medicine on the one hand and religion, law, and society on the other hand are much less distinct" (1978:125).

It is interesting to note that within this style, as exemplified by Foster and Anderson (1978), there are really only two types of medical systems - biomedical, and non-biomedical, also known as 'traditional'. The opposing of a biomedical model against a 'traditional' one is a revealing linguistic choice, as it erases from the biomedical model the presence of a cultural history or traditions. The opposition simultaneously makes 'tradition' the defining characteristic of the non-biomedical system - implying a non-objectivity, a blindness or knowledge limitation imposed through its being first-and-foremost culturally embedded. These broad conceptual categories lead to astonishing generalizations about what it means to practice in the absence of biomedicine, that is, to have a non-biomedical system which is (to the writers) informed by tradition.

Within these unnamed but categorically universalized societies of the non-biomedical sort, it is noted that "they treat social cause rather than disease" (Foster and Anderson 1978:125). This produces the intriguing effect of an extremely high level of "consumer satisfaction", in comparison to which "our [medical] system is much less impressive", indicating that "in the wider psychosocial context of life, we obviously have much to learn" (1978:124). Such a position draws a clear line between the heuristic categories of physiology and psychology. It implies that the ontology of Western medicine allows the treatment of physiological (i.e. true) disease - as found in the unconscious live or dead body on the examining table - while the epistemology of so-called traditional systems is such that it actually treats social problems. This is to say that the body is only incidentally attended to in the course of social redress. This modern western vision is a dichotomous analysis which is only viable given a philosophical position which allows for the conceptual possibility of the body existing outside of and before the social order (cf. Strathern 1992a).

Clearly it is not to the benefit of the anthropological practitioners of this approach to recognize that the polemic categories drawn upon are very much Western ones, or to consider how category boundaries might shift if they were to be developed from within the 'traditional' system examined.

Formula Two: Proving the Traditional to be Biomedical

The second pre-1980 'formula' which I identify as a common tendency can be described as one of verbal, conceptual and cultural colonization. Typically, the anthropological researcher would present data for the purpose of uncovering what was 'really' going on in the 'traditional' system. Such an approach makes use of the rather tired emic/etic split, as always omitting consideration of the individual anthropologist who somehow has the ability to compose an accurate emic analysis as well as a non-subjective etic one.

The approach itself would almost invariably involve a process of cross-cultural translation (always from the 'traditional' to the biomedical). The translation would form the basis from which to determine whether certain exotic illnesses or healing techniques were legitimate. To be real, the illness or cure had to have a biomedical equivalent or be biomedically measurable. The body, understood as a-cultural and fully knowable through biomedical approaches (which are thus implicitly understood to be themselves a-cultural practices), served as a central piece of evidence for such arguments.

Examples of such research are numerous. Many can be found which deal in particular with mental health, where the researchers were attempting to determine whether mental health disorders or curative practices could be divided into the two categories of cultural (i.e. 'culture-specific') and non-cultural (i.e. universal or biochemical). The results of such research would imply whether a 'social' or biochemical cure was appropriate. For example, if a disorder was culture-specific, then that specificity indicated it was a cultural product. Conversely, if a disorder was universal, then that universality was probably due to the same biochemical/neurological disorder manifesting itself across cultures. Such is the nature of the research performed by Raymond Prince (1980), in his attempt to argue that all healers cure in part through the psychotherapeutic manipulation of certain bodily healing mechanisms (1980: 291-292), as per the biomedical definition of body which is understood to be universal. This research allowed him to assert that certain healing methods had a positive physiological - and thus measurable or organically 'true' - impact and so constituted effective universally valid healing techniques.

A similar example is to be found in the work of Wolfgang Jilek (1976). He argues a case for the validity of Salish Indian spirit dancing as a healing process on the basis of it *really* being "a form of brainwashing" (1976:208), an analysis which Salish people would almost certainly find inappropriate. He asserts that:

> ... by the example of Salish spirit dancing it can be demonstrated that traditional therapeutic principles, developed in a very specific, non-Western cultural and historical context, confirm the transcultural validity of certain theoretical propositions of modern physiology and psychology...
>
> (Jilek 1976:211)

Clearly, the basic premises for such work include the notions that human bodies share a universal physiology and the way in which we know this physiology can be a-cultural. As comparisons only indicate correspondence between biomedicine and another tradition, not between two non-biomedical systems, it is apparent that the attitude is one of proving the object of biomedical diagnosis to be biological and therefore real. Thus, Jilek joyfully concludes that his research proves that "psychology itself is first of all physiology" (1976:211). Given this statement, the theoretical propositions he alludes to are those of a causal relationship, of physiology causing psychology.

Early attempts to soften this sort of dichotomous position, of bodily (biomedical) reality versus culturally specific (non-biomedical and therefore non-true) reality into a more culturally sensitive approach were worked upon by many researchers, including Arthur Kleinman. I would still include Kleinman et al.'s work (1978) within this discussion of 'formula two' tendencies, as I believe that the changes they offered are really only discursive shifts, since the underlying theoretical approach which gives privilege to the biomedical reading as baseline 'truth' remains.

Kleinman et al. (1978) argue that ill health really has two components. One component can be labeled 'disease' and should be understood as describing the pathological (or true bodily) basis of ill health. The second component encompasses the subjectively experienced or culturally influenced way of knowing or living with the ill health symptoms, and constitutes the category labeled 'illness'. Although this analysis attempts to give more credibility or value to different cultural medical traditions, as it acknowledges a cultural component of Western experiences of ill health, it still privileges the biomedical interpretation of ill health. It defines all ill health as being **culturally** real or legitimate, but only those cases where the ill health is physiologically knowable (that is, biomedically knowable) as constituting actual disease.

The approach which this verbal variation allows is an insidious one, in which the anthropologist attempts to uncover the patient's health/illness models and either 'explain' the biomedically knowable 'true' disease in terms of the patient's cultural illness manifestations, or 'educate' the patient if their illness understandings interfere with the biomedically true disease treatment program (Kleinman et al. 1978: 256-257). The suggested focus thus fits firmly within this formula, as it rests upon the presumption that different cultural constructions of reality can be drawn out of and therefore understood through the same baseline physical, bodily, biomedically true reality.

There is no or little consideration given to the possible clinical construction of that baseline reality as an equally cultural production. In chapter three I present data (Rapp 1993) indicating that some social workers and genetic counselors currently take this approach. This leads in those cases where the mother has an different understanding than they do as to what is a birth 'defect' to strong disagreement between the workers and mothers as to whether a baby is genetically aberrant and should have been aborted or simply 'his father's son'.

Current Diversions and Diversity

Elements of these formulaic, dualistic and rather surprisingly ethnocentric trends still permeate some current anthropological research. However, approaches and foci have diversified greatly since the early 1980s, and many researchers are quite critical of the black-and-white premises which underlay previous work. In Lock's review of body literature in anthropology, she notes that over the past twenty years, "interpretations that seek explicitly to collapse mind/body dualities, or that are essentially dialectical or montage-like in form, are now privileged" (1993: 136). Patient advocacy within the biomedical framework is also a strong area (Baer 1987: xxii). Cross-cultural research projects similar to those described in the formulas above continue, but are for the most part more rigorous and less prone to such broad generalizations (i.e. that such a category as 'traditional systems' is a meaningful one). Another strong focus, which is on the same branch of the medical anthropology bramble bush as my own work, is analysis of the biomedical system as a cultural system in its own right.

Contemporary Medical Anthropology and the Biomedical Tradition

Much of the research and writing currently being performed by cultural medical anthropologists has been critical analysis of the biomedical tradition, most of it arguing that the biomedical system is but one discursive system among many, each of whose *legitimacy* is culturally bestowed and maintained. Much of this work has focused upon demonstrating the nature of objective and/or scientific biomedical practice and knowledge as situated within powerful historic and political trends. Although in some cases such research does little more than accuse biomedical practitioners of being opportunists and 'power-hungry', the anthropologists whose work I wish to model myself after take more respectful approaches. For example, acknowledging biomedical practices as a 'mixed-bag' which like all cultural practice is entailed in power relations, and whose practitioners should be assumed to be acting in good faith unless there is strong evidence otherwise[3].

Cross-cultural Contestation

This often 'soft-core' constructivist stance in the anthropology of biomedicine is an explicit move away from the premise that biomedical knowledge - derived from careful biological study - forms a baseline of true or absolute knowledge, as I have described in the 'formulas' above. Within such work, when it does makes use of a cross-cultural analysis, the purpose is often not so much to explain the workings of the other culture's medical/social system, but rather to quite explicitly sharpen the critique of the biomedical system.

Michael Taussig's "Reification and the Consciousness of the Patient" (1980) is an early and astute example of this approach. The conceit of his argument is that biomedicine does in fact have both a political and social ideology which is concealed by the biological signs through which it is reified. He draws upon the cross-cultural example of Azande medical practices. This comparison is not to inform or teach readers about the Azande, but to bring into high relief how simple it is to read an alternative system in terms of its social characteristics and how difficult it is to see our own system in similar terms.

---

[3] For example, Martin (1995:257) acknowledges that her position on those medical experts who produce knowledge about the body, a position previously informed largely by textual analysis or interviews with 'patients', changed as a result of the intensive participatory observation she undertook in recent fieldwork. She writes that medical researchers "became real, whole people" and "as a consequence [of learning the conditions under which they worked] it became impossible for me to describe them as the villainous source of damaging images of the body, as I had come dangerously close to doing for reproductive biologists and obstetrician-gynecologists in The Woman in the Body "(1987).

Taussig attributes this difficulty, in part, to an ideology/epistemology which regards its creations as 'out-there' or inherently objective (Taussig 1980:4-5). This makes the notion of biological knowing as itself a cultural product extremely hard to conceive of, especially as the reification process produces the tangible evidence used to negate the argument that they could be cultural. He therefore argues that an important focus for medical anthropologists is to look for and critically analyze the biomedical construction and reconstruction of its own "certain colonizing reality", as the cultural components of this 'reality' may not be self-evident, especially to its practitioners (Taussig 1980: 13).

Byron Good (1994), who works within a similar constructivist approach, takes the most extreme position which I have encountered. He advocates abandoning cross-cultural juxtapositions (between the biomedical system and any other) entirely. His argument takes as a premise the notion that there are certain Western cultural prejudices which are able to seep - often unnoticed - into our work as an almost inevitable consequence of using the biomedical system as a benchmark. These cultural prejudices undermine our ability to critically analyze or investigate within a comparative format.

Good argues this position in his 1994 text, Medicine, Rationality and Experience: An anthropological perspective. In this work, references are made to cross-cultural material for the explicit purpose of illuminating the double speak which he argues is practiced by many medical anthropologists.

Byron Good's argument focuses upon the subtle discursive or writing practices of medical anthropologists which he asserts may actually contradict their theoretical positions. One of his examples is the common practice of referring to those understandings which are not in agreement with Western understandings as 'beliefs' and those which do concur with Western understandings as 'knowledge'. Good's concerns echo issues raised by Lock and Gordon several years previously:

> ... [in anthropology] scurrilous words such as superstition are avoided and use is made of the more elegant term 'belief' which has nevertheless, until recently, been assumed to be an explanatory system of an entirely different order than one grounded in science.
>
> (Lock and Gordon 1988:3)

Good, Lock and Gordon all argue that the linguistic practices of many medical anthropologists in their cross-cultural work have privileged and continue to privilege biomedical traditions and trajectories of knowledge over those which are non-biomedical. This has a rather ironic effect in those cases where the anthropologist advocates a theoretical position which rejects such hierarchical value judgments, as the anthropologist may be practicing the subtle subversion of their own arguments through their discursive practices.

Gordon and Lock argue that an appropriate and useful response to this issue would be for medical anthropologists to choose to examine biomedicine in terms of two specific areas which they feel have been neglected to the detriment of the field. These areas of concentration are: (i) the control, distribution and dynamics of the application of biomedical knowledge; and (ii) the relationship of knowledge and its application not only to social and symbolic healing, but also to the reduction of individual pain and suffering (1988: 5). The investigation which is detailed in this thesis endeavors to respond to both of Lock and Gordon's criteria of what would constitute useful research. Such a response implicitly recognizes biomedicine as a powerful and effective healing system while simultaneously positioning it as a social institution embroiled in the politics of knowledge production.

Good, however, draws a somewhat different conclusion from his observations. He presents his critique to create a case for abandoning cross-cultural comparisons in the work of medical anthropologists altogether - at least until there is a stronger critical body of literature on biomedical practices. This a leap which Lock and Gordon do not make, although they do imply that medical anthropologists would benefit from focusing more upon biomedicine and less upon other healing traditions. Good argues that the meanings which are forced upon and interpreted into activities through the uncritical - or not critical enough - application of Western categories may actually be more misleading than revealing for the audience/writer (1994: 22-23).

In a related article, Byron Good, in co-authorship with Mary-Jo DelVecchio Good (1993), also questions the utility of medical anthropologists making use of the category 'biomedicine' with reference to medical knowledge production. They argue that this conceptual category is too often presented as though it were a single monolithic entity. Good and Good argue that it could far more accurately be described as entailing a great diversity of contingent discourses, many of which may in fact be contradictory (1993:82). They cite several examples of medical anthropologists writing on knowledge production in which the anthropologists purport to analyze its 'tenacious assumptions' or inherent philosophical underpinnings (For example, Gordon (1988) and Freidson (1986)).

Good and Good point out that the generalizations of this literature stand in strong contrast to the findings of a plethora of ethnographic studies on actual biomedical practitioners and the workings of specific biomedical clinics. These studies appear to demonstrate a diversity of conflicting perspectives and discourses at play within the general category of biomedicine (1993:82).

Good and Good are convinced that conceptual categories such as 'biomedicine' "serve us poorly ... for understanding contemporary medicine", as "such analyses tend to produce glib characterizations" (1993:83). Good and Good thus argue for a specific style or approach to research, which they demonstrate through their work on the construction of the body as an object of medical knowledge, by doing participant observation within a training program for student physicians at an American medical school (1993). They argue such a localized approach is necessary for the discipline to have a strong foundation:

> At this stage in the development of medical anthropology, little can be expected of studies of the nature of medical knowledge unless they are situated, contextualized, and ethnographically rich.
>
> (1993:83)

To this end, the positioning of biomedical practices in my analysis are usually specific and exampled, i.e. drawn from documented situations and specific medical texts. However, unlike what Good appears to imply, I do not subscribe to the position that significant trends cannot be tentatively identified, nor that they cannot be usefully brought to bear in weaving a larger analytic body. I see contingent generalizations as necessary if one wishes to take a political position or otherwise effect social change.

Many medical anthropologists who similarly value studies of specific aspects or discourses of the biomedical system have chosen to take foci which fall under the mandates outlined by Lock, Gordon and Good by critically examining the politics of western medical systems, although none state that their doing so is out of a rejection of cross-cultural comparison, as advised by Good. Recently published works deal with such issues as how ideology shapes knowledge of post-traumatic stress disorder (Allen Young 1993), a discursive analysis of a dialogue on birth risk (Kaufert and O'Neil 1993), and patient non-compliance with physician directions as adaptive behaviour (Bellisari 1987). The issues considered - including who profits by defining illness in a certain way, at whose cost, who is pathologized into silence and/or discredited, who is able to negotiate themselves positions of power and who is definitely subordinated, etc. - are clearly those of contested power and negotiated knowledge.

There is thus a movement within medical anthropology, as within anthropology as a whole, from excessive universalization, generalization and ethnocentric privileging towards a much more localized and situated approach. This approach is far more self-aware and self-critical, with analytic practices which acknowledge themselves as somewhat contingent, and can be characterized as post-colonial. My research project is located within this general terrain.

Popular Culture, Public Philosophy and the Trackmarks of Medical Knowing

Much of this work looks to popular culture media and the (non-academic) philosophy which informs and is informed by that media for its source material. I will refer loosely to this philosophy as 'public philosophy'. An anthropology of popular or public engagements with biomedicine - or one of its discursive components - can draw usefully upon the rich tradition and tools of anthropology. Much use can be made of ethnography's toolkit, its valuation and acknowledgment of cultural situatedness, its informant/interviewer practices, its multiplicity of methodologies for cultural analysis, as well as anthropology's long history of addressing concepts of body and embodiment.

Researchers working within this field[4] have with great creativity and insight made use of such untraditional sources as Cosmopolitan magazine, or the slogans of certain consumer products. A recent example is the citations drawn upon by Epstein (1995: 2). Epstein cites at length several articles which were published in the New York Times' "Styles" section as a central source for her discussion of biosurgical technologies and their dialogue with popular fashion trends.

In taking such an approach, the researcher recognizes the dialectic nature of knowledge-building which is not performed by the 'specialist' in isolation, but rather through a constant negotiation process. This is not to naively imply that there is no power difference between a member of the public and a health care professional when it comes to deciding what is or is not a medical 'fact'. It is rather, as discussed in-depth in chapter three with regards to medicalization, to acknowledge that the playing field is a broad one with multiple players contributing to a greater or lesser degree, sometimes behind the (more obvious) scenes.

Emily Martin's analysis of immunology fits squarely within this genre (1990). Martin discusses the metaphors used to describe and understand human immunology, based upon an extensive survey of immunology textbooks used in medical classes as well as a number of popular magazines and non-academic books. She argues that social differences, including those which exist in gender roles, office hierarchies, and perceived in-group/out-group affiliation provide the metaphorical material through which both scientistic and popular understandings of immunology are formed. These scientistic understandings feed back circuitously into society, supporting the values and practices from which they were, perhaps invisibly, drawn (1990:416-419), but bearing the legitimacy of the mark of medical knowledge. This is a careful but colourful exploration of reification trackmarks.

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[4] Anthropologists are far from alone in working within the domain of popular or public culture. There are many notable researchers in this field with backgrounds in other social sciences as well as from the humanities. These researchers bring their own perspectives and toolkits, many of whom make use of anthropologically originated methodologies or theoretical frameworks. The field is thus truly interdisciplinary, with the possibility for the heuristic - and sometimes enslaving or restricting - boundaries of academic disciplines to blur and blend into indistinctness.

Such an analysis could only be drawn from seriously examining popular sources of information, because that allows the knowledge construction dialogues to become more evident. Martin makes use of 10 book length popular publications on immunology, as well as mass media articles from such magazines as Time, Newsweek, and National Geographic. It is only because she draws from popular culture sources that she is able to credibly make some conclusions about the social ideology which is clearly drawn from such material.

I am working within this anthropological tradition, taking as my focus not the practices of the "exotic other", but rather aspects of my own society. As such, I will follow Epstein and Martin's lead, taking public texts and public acts (eg. judiciary decisions) as central data sources. My project is not another critical repositioning of the general conceptual categories used in the biomedical construction of bodily/experiential reality, although those arguments certainly inform my thinking.

My research is instead an examination of cultural meanings which inform and are informed by understandings of assisted reproduction, as well as some of its 'spin-off' issues. Assisted reproduction has been positioned both as miracle and abomination[5], patriarchial plot and source of bodily liberation[6]. For it to have the potential to be evaluated at such extremes of a sociocultural continuum indicates to me that it stands as a cultural 'hotspot', where important cultural assumptions are threatened or perhaps simply made obvious and therefore slid from hegemonic to ideological. Moreover, anthropologists have singled it out as an area where "considerable concern continues to be expressed [by legislators, judicial bodies, etc.] about how to establish a legitimate foundation for decision making and debate" (Franklin 1995b:323).

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[5] See discussion, chapter two.

Biotechnology and Public Expectation

Biomedicine is a fascinating and complicated phenomenon. Like all cultural systems it is always changing to address and respond to current sociocultural demands and desires. One of the unique features of biomedicine is the speed with which its vast repertoire of physical technologies is changing. This has in part allowed for a significant increase in life expectancy in Euro-American countries (Turner 1991:22). It has also led to an augmented expectation for biomedicine to allow people to 'live normal lives' who were either born in such a way or came to be in such a way that it is understood that their lives are not normal. As discussed in chapter three, the issue of what it means to 'live a normal life' shows itself as extremely significant in terms of people desiring to make use of assisted reproduction, as well as the expectation that people should have this desire.

It is not surprising that the public has such expectations. It is commonly known that biomedical technology allows for the possible chemical re-writing of our bodies as well as the replacement of portions of our physical bodies - heart, lung and other discrete organs are 'transplanted' (both 'real flesh', taken from one person's body/self and forcibly made a part of another, and 'cybernetic flesh', which never knew a living womb), and the building and attachment of synthetic limbs. We can re-sculpt our bodies, removing ribs to create more slender waists, use liposuction to remove and reposition our body fat (from our hips to our lips, for example), replace burnt flesh with animal flesh. We can use hormones to change our fat deposits and body hair growth, to alter pain signals, and to change our emotional states (cf. Wolf 1991; Kimbrell 1993).

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[6] See discussion, chapter three.

It is of great fascination to both the public and the academic sectors that biomedicine is not limited to the replacement or alteration of isolated bodily components or pieces. It also seems able to re-sculpt those aspects of individuals which are often seen as non-organic or extra-somatic; personality, demeanor, etc. The recognition of biomedical technology as having the potential to rebuild/re-make/re-place our bodies (our selves) has led to a proliferation of writing in two arenas outside of medicine itself; that of social science and that of science fiction. Although I will look critically to the social science writings, I will also consider those forms of popular writing which are definitely mass media, such as newspapers and widely-read magazines. Science fiction novels, however, as they are consciously constructed as fictions, I will leave to literary critics.

I want to interrogate the debate which has surrounded assisted reproduction, to try to determine something regarding the nature of the debate; that is, why the debate itself exists. My aim is to develop an image of what the essential element(s) are in this formula which allow readings of assisted reproduction to be both of miracles and abominations, for physicians to be positioned both as people to be applauded for answering a dream as well as deserving to have scorn heaped upon them. Part of such an interrogation entails identifying some of the interests served, or the sociocultural needs which are identified/threatened, by the narratives surrounding such examples of biomedical intervention.

This exploration will involve developing an understanding of what issues come together to form points of intense contention. Thus, my exploration will involve the comparative consideration of related issues, such as pre-natal testing, and the controversy (or non-controversy) which they have and continue to generate.

What is to Follow

Within (medical) anthropology, there is a tradition of studying reproduction beliefs and practices within a cross-cultural framework. This area has experienced a major upsurgence in interest since the 1970s, following the meeting of second-wave feminism with anthropology (see review article Ginsburg and Rapp 1991; and Franklin 1995b: 323-4; and the recent anthology edited by Ginsburg and Rapp 1995). Such work will be referenced in my text where specifically relevant for the topic at hand. There has, however, been fairly limited discussion or debate over reproductive technologies which 'assist' in conception within the Euro-American context. British social anthropologists have written in this area the most extensively, and thus I draw heavily upon their work. Their interest has primarily constituted deconstructive analyses of public policy, both that which has been formally legislated as well as that which has been proposed and debated in parliament.

Much of the anthropological research in the United States has considered specific court cases and the legal precedents upon which they draw or which they themselves potentially constitute. In both cases, such analyses seek to reveal something about the central cultural and social meanings which underlie and inform the debate. That is, those meanings which may not be explicitly stated by the individuals debating the controversy or making use of the technology, but which are contained in the various tropes used in the discourse.

Although these technologies are in use in Canada, and a (Canadian) Royal Commission put forward a report in 1993 with 173 legislative recommendations (none of which have been made into law), there has been little consideration of these issues within a Canadian anthropological context. This lack of interest is surprising, especially given that the debate, in both public and political writings, relies upon cultural discourses which assert such contingent needs as those of maintaining stable social values, preserving the sanctity of tradition, and of the right of children to be born into nuclear families.

Issues of kinship organization and associated obligations are clearly germane to these arguments, although the debaters do not often explicitly target them as a focal point of contestation. What makes the public/political rhetoric about families and tradition even more intriguing is that it is drawn upon equally both by those who argue for a moratorium on the use of any and all new reproductive technologies, and also by those who fully endorse their use[7]. Such a debate is ripe for anthropological analysis. In my examination of these issues, I do not expect to 'solve' the debate. I hope rather to demystify it somewhat, by drawing out and engaging with some of its constitutive elements - which are currently woven very tightly into its cultural fabric. In the following chapters I will focus most heavily upon artificial insemination 'by donor', and *in vitro* fertilization and its related technologies, in terms of British, Canadian and American public, legislative, and anthropological responses.

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[7] This intriguing (and apparently paradoxical) situation is explored in some detail in chapter two and three.

One theme to which I will return throughout this document is the utilization by multiple players of discourses linking assisted reproduction with dangerous practices - for example, that the open sanctioning of assisted reproductive technologies could result in moral depravity due to 'aberrant' family forms emerging[8], or alternately that it could result in women being complicit in their own social oppression[9]. In most such cases, it is argued that legislative action is necessary to curtail these possibilities. This theme is therefore coupled with a pattern of social compensation manifest through the actions of legislative bodies or other parties in positions of authority. Be they court judgments, legislated bills, or professional mandates of physicians, these actions generally serve to block the potential for social change which is recognized to be a potential 'side-effect' of new reproductive technologies[10]. Thus the status quo is maintained, but at the cost of making its exclusive and elitist principles and practices far more explicit than they usually are. This has the paradoxical effect of making the status quo more vulnerable to being shifted or challenged, as certain of its discriminatory components come to be scrutinized under the social microscope.

A second theme is that of negotiating realms of authority so as to determine 'bodies that matter', that is, processes by which some people and their interests come to 'count' while others do not (cf. Butler 1993). This theme guides the discussion in all chapters. In the second and third chapters this theme is observed as an occurrence embedded in socio-cultural power relations, and silently upheld through social normative expectations. However, it is actively interrogated and deconstructed in the fourth chapter, where I discuss the contestation (and the implications of that contestation) regarding whether out-of-body embryos should 'count' as people, or as property.

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[8] See Chapter Two, in particular.

[9] See Chapter Three, in particular.

[10] For example, recognizing the right of single or lesbian women to become mothers through AI who physiologically could conceive through heterosexual intercourse, but do not want to.

In chapter two as well as chapter three, I will bring forward certain discourses and rhetorical practices associated with assisted reproductive technologies. I do this by describing the historical development of certain technologies and practices as medical treatments, as well as the social controversy and policy which correlates with those historical moments. First, in chapter two, I discuss those procedures termed within medical discourse as 'artificial insemination by husband' (AIH) and 'artificial insemination by donor' (AID). I select these practices because they have a medical history spanning several decades. Thus, historical shifts and trends can be identified and interrogated, discourses revealed. In this chapter I make heavy use of popular media sources, specifically Canadian newspaper articles, as I want to work with popular as well as 'professional' understandings and uses of artificial insemination so as to locate discursive trends.

In chapter three, I consider '*in vitro* fertilization' (IVF). I choose IVF and its related practices because its supporters and critics make use of what appear to be very different sets of discursive and strategic practices than those used by parties who have argued against artificial insemination. Technical aspects of its procedure are also common to other forms of assisted reproduction, such as 'gamete intra-fallopian transfer' (GIFT), 'zygote intra-fallopian transfer' (ZIFT), and 'tubal embryo transfer' (TUT). IVF is scrutinized in terms of the multiple narratives and arguments which purport to 'tell the truth' about IVF, each telling considered as serving to authorize different interests in their attempt to become the 'naturalized' reading. Here I make use of medical texts and popular feminist books, as well as academic social science literature.

Chapter four is the most theoretical chapter, where I delve into the complexities of a side-issue created by the IVF procedure. It is perhaps my most crucial chapter, in that it demonstrates explicitly the value of anthropologically-informed knowing for working through and conceptualizing an issue which is only now emerging into ideology and discourse. I specifically consider positions regarding the moral and legal status of embryos created outside of a woman's body which are not intended for implantation in the womb of the woman whose body produced the ova. This issue, at its most basic level, is one of attempts to create a baseline from which one knows whether to treat these embryos as 'people' or as 'property'. As such, it has been debated in depth and with strong emotion in British parliamentary as well as American legal forums since the late 1980s and remains highly contentious (Franklin 1995b:323). It has received a great deal of attention within British anthropological circles, as well, as it touches upon issues of English identity in kinship and family, and related matters of cultural category formation.

My concluding chapter will synthesize the material presented in the other chapters. This refiguring of that material as a whole body allows for a more sophisticated and generalized analysis of it. The refiguring places issues regarding assisted reproduction as having varying levels of cultural intelligibility and contestation, according, in part, to whether they fit 'neatly' into an already existing discursive framework.

The final chapter will also discuss the relevancy of such medical anthropology studies not only to develop further the understanding of the complicated sociocultural issues involved in the matters of the control, distribution and dynamics of the application of biomedical knowledge, but also in terms of contributing to public policy development. In this way, such studies contribute not only to the field of medical anthropology but also to the public at large.

Chapter Two

Artificial Insemination and the (Non)Crisis in Morality;

Or, how the social status quo was maintained despite fears to the contrary

Technologically assisted conception

Although North Americans and Europeans have been making formal and medical use of technology to assist in conception for many decades, headlines have only been regularly made since 1978. That year, 1978, marks the first live birth of a child - Leslie Brown, daughter of Mary Brown - conceived through *in vitro* fertilization. This event was labeled by most as a 'miracle'. Many stories regarding assisted reproduction which have made headlines since then have reported outcomes not as 'miracles', but rather as moral or physical 'abominations', or at least as highly controversial.

Such headlines include reports of the 1984 Australian case of two frozen embryos[1] which were suddenly 'orphaned' when their 'mother' and her husband were killed in a plane crash. No one knew how to deal with the issues which arose: Should the embryos be implanted in other women? Did they have the right to inherit a portion of the genetic parents' estate if they were born alive? Who had the right to decide what to do with them? Public outrage was incited by every proposed solution. Eventually the embryos were 'placed' in two women - without the press being alerted - although neither successfully implanted (Blank 1990: 66).

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[1] I will be using the term 'embryo' to refer both to 'pre- embryos' (fertilized eggs less than 14 days old) as well as embryos (fertilized eggs over 14 days old). The politically charged invention and deployment of the term 'pre-embryo' is discussed in Chapter Four, subheading 'Kinship as a Conceptual Hybrid'.

From 1987 through 1989, the North American public was similarly at odds as to how to respond to the American 'Baby M' case. This infamous case made 'surrogate motherhood' a household term. It involved a woman - Mary Beth Whitehead-Gould - who contested the validity of a surrogate motherhood contract which she had signed, following the birth of the contracted infant (Kimbrell 1993: 110). The contract stated that, upon birth, she would release the infant she had gestated to William and Elizabeth Stern[2] (as William's sperm was used to artificially inseminate Whitehead, he was the biological father, and Elizabeth was to adopt the child) (Merrick 1990).

Although the case went through several courts and multiple appeals (where previous decisions were overturned), neither of the biological parents got the final outcome they had pressed for, of uncontested 'parenthood' of the baby girl. On the basis that William Stern had biological paternity while Mary Beth Whitehead had biological maternity, it was decided that neither should be denied a parental role. Although they were apparently on 'equal footing', the final ruling made Stern the 'real' parent, as he was granted custody. His wife's adoption of the child was, however, annulled, and the 'mother' - as a partial recognition of her valid claim to the role - given extensive visitation rights (For an in-depth analysis of this case, see Hartouni 1994).

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[2] It is of interest to note that Elizabeth Stern was not infertile nor was she incapable of carrying a fetus to term. She had a mild form of multiple sclerosis, which doctors argued at the trial would put her at a 'minimal risk' if she was pregnant, though were divided as to what such risks were (Raymond 1993: 4).

A third example can be drawn from any of several cases where American women have demanded - and usually with success - to be inseminated with the semen of a recently deceased husband (Harpaz 1995). However, none of the hundreds of American, Australian and German women who have requested insemination with semen from 'Otzi', the 5,000 year old Iceman found in an Austrian glacier in 1991, have been successful - apparently the Iceman's cells are too damaged for the procedure to be medically possible (Kesterton 1994: A24). The medical impossibility has made the issue moot in this case.

However, the social issues which this possibility invokes - given the success of American women in their demands for insemination from dead husbands - remain unaddressed. Does a woman by virtue of having a relationship with a man while he was alive have the right to make him a 'father' post-mortum? Does a man 'own' his sperm after death, or, like organs, should they be donatable material? What privileges would such a child have a right to? Could a woman claim a share of a wealthy man's estate for her child if she was successfully inseminated with his sperm post mortum? Given that proof of a biological link does support paternity claims under current British, American and Canadian legislation and tradition, the child could have all the rights and privileges which would normally be inherited from ones father. This possibility - tantamount to raping a dead man for material gain - is extremely distressing, especially as there will probably be no legislation passed on the issue unless someone actually tries to make such a claim.

Although the birth of Louise Brown had a largely positive public reaction, the other examples described above horrified the public-at-large[3]. It is in part such situations, where the end result is not a happy nuclear family, that have lead to a public demand for information on these technologies as well as a call for governmental regulation. As is described below, this sort of ambivalence, where public approval of practices and trust that health care practitioners are making the 'right' choices, sway as the social context into which such a child is born changes, is common to issues of assisted reproduction.

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[3] With the exception, perhaps, of the rather surprising Iceman episode, as the desired insemination was not medically possible. I suspect, however, that if viable semen could have been extracted from the Iceman, that horror and disgust would have characterized public response, as well as a number of ex-communications by the Pope.

What I have described thus far are generalities, examples selected for the range of issues with which they are conflated or themselves create, to give a sense of the complications - and social uncertainties - which are generated through assisted reproductive practices. From generalities I now slide to specificities, and begin to contextualize and critically problematize two related practices. The remainder of this chapter focuses upon artificial insemination by husband (AIH) and artificial insemination by donor (AID), presented in terms of historical development as well as social controversy and legislative response. In the analysis which concludes the chapter, I argue that such practices are morally regulated - both by health care practitioners as well as by persons in judicial positions - such that the values associated with what is perceived to be the social status quo are largely maintained. That is, the possibility that practices such as AID could drastically alter what people recognize as constituting a family is argued to be an extremely unlikely one to materialize.

Artificial Insemination

Artificial insemination (AI) is hardly a new practice. The first recorded medically assisted AI procedure on a human woman took place in Britain in 1793 (Kimbrell 1993: 76). The procedure was not performed in America until 1866, while in Canada the first recorded case was in 1950 (Royal Commission 1993: 431). Due to the simplicity of the procedure, it is likely that women may have practiced self-insemination for centuries before physicians chose to define it as a medical procedure (see, for example, the discussion in Edwards and Brody 1995:476; Helsa 1995:756).

One relatively 'new' development with regard to AI is that it has become a profitable specialization within the medical industry, as demand for the procedure has begun to grow rapidly. In 1987, more than 170,000 American women became pregnant through AI procedures (Kesterton 1994: A24). By 1990, there had been approximately 500,000 AI babies born in the United States. Where only about 38% of AI pregnancies result in live births, this indicates that approximately 1,500,000 American women had undergone AI. Kimbrell (1993: 77) reports that in attempts to achieve pregnancy, a woman or couple may end up paying $1000, and that over the last few years Americans have spent $165 million dollars on artificial insemination, about a quarter of which is covered by insurance companies.

Developments in related areas, such as 'sex-selection', have changed the manner in which AI is or has the potential to be administered. The first Canadian sex-selection clinic was opened in 1987 by Dr. Alan Abramovitch in Toronto. In this controversial clinic, procedures are performed on semen to isolate X-sperm from Y-sperm, increasing the probability that the conceived zygote will be the sex which the parents state that they prefer (Alberta Advisory Council on Women's Issues 1988:31). This is already a common American practice, where 31% of physicians with over 100 AI patients report that they offer sperm 'separation' (Kimbrell 1993: 77).

The possibility of cryopreservation has also had an impact. The near-perfection of freezing semen, so that it can be stored for years as well as be shipped great distances, has facilitated the appearance of 'smart sperm' suppliers in the United States. In turn, this practice has led to the opening of somewhat controversial 'sperm banks', such as the California based "Repository for Germinal Choice". This non-profit organization stock-piles the semen of Nobel prize winning men, as well as other men who have similarly high-profile careers, or are gold medal winning athletes (Kimbrell 1993:77). It thus fulfills the eugenic dreams of 1940's British physicians who saw the quality of human 'stock' as threatened, due to the 'best and finest' being those men who would probably die in war, from acts of bravery and self-sacrifice. One such physician wrote that "artificial insemination should provide a most useful supplementary method of producing children of high genetic potential, since the male donors can be specifically chosen for their superlative genetic endowment" (Carter 1945: 130).

The "Repository" will only sell its 'President's Choice style' sperm for insemination to women whom the clinic's Board of Directors consider to be intelligent and successful enough to deserve it (Blank 1990: 61). Women who fail to meet the Repository's standards of excellence are still able to make a supermarket-style 'superior' semen selection through less discriminatory 'for profit' sperm banks, such as California Cryobank, as described below with regard to artificial insemination by donor.

Artificial Insemination "by Husband"

Artificial insemination practices are divided into two general categories, 'artificial insemination by husband' (AIH) and 'artificial insemination by donor' (AID). AIH is the category applied when the woman's legal husband or partner provides the sperm, while AID involves using sperm from a paid-donor who is usually anonymous. AIH is used in cases where the 'husband' produces viable sperm and the 'wife' ova, but no ovum has been fertilized for a variety of reasons, including low sperm density, low sperm count, abnormal sperm physiology, weak sperm motility, etc. (Edwards and Brody 1995: 130). The probability of fertilization is increased through the sperm being filtered and washed of impurities, concentrated, given stimulants, etc. (Edwards and Brody 1995: 143). For many physicians, AID will only be performed following unsuccessful AIH attempts, as they will not provide AI to unmarried women. Physicians in the United States and Canada are able to select who they will or will not service based upon whatever criteria they (or their clinic/hospital) choose, as there is no legislation regulating access.

In selecting who to accept as clients, many physicians in Canadian and American clinics report that they base their decision upon a personal consideration of several factors. The factors consistently include: that the woman is married, whether the physician considers her intelligent, whether the physician perceives her relationship with her male partner to be stable and healthy, whether her social and economic status are satisfactory, and finally whether the physician thinks that the woman would make a 'good mother' (Manitoba Advisory Council on the Status of Women 1989:7; Radke 1992a: iii; Pfeffer 1993:157). In short, they determine whether the woman is living a middle-class, heterosexual, nuclear family, lifestyle[4]. Women with 'radical' ideas of subverting traditional family definitions (for example, single or lesbian women who want children without engaging in heterosexual sex or dealing with issues of a man asserting paternal rights over their child) are in many cases simply turned down. The scruples of many of the practicing physicians ensure that 'traditional family values', as are assumed to be found within the 'traditional nuclear family', are upheld.

This does not mean that lesbian and single women have not made use of AI to become pregnant, but rather that they have much more difficulty finding a physician to facilitate the procedure. Thus self-insemination (SI), where a woman will purchase semen directly from a male friend or stranger, without a medical intermediary, is sometimes practiced. A woman may also follow this route in order to bypass the high fees charged by American clinics, in defiance of the medicalization of AID, in other cases where the clinic will not serve a woman because she does not fit the customer profile (eg. her income is judged inadequate), or because the woman does not wish to be inseminated with the semen of a stranger.

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[4] Researchers for the Alberta Civil Liberties Volumes found that Canadian private clinics were very likely to follow such criteria (90% stated they did), while university-based hospitals and clinics were far less likely to discriminate on such socio-economic criteria, especially those of marital status or sexuality (Radke 1992c: 33).

Using the semen of a friend, however, places the donor in the position of being known by the contracting woman and vice-versa, so that either party could at some point sue for custody or support. Alternately, anyone can purchase semen from the mail order catalogues of California Cryobank or other California mail order sperm banks (Pearce 1994). The Canadian Royal Commission on New Reproductive Technology reports that approximately 1000 to 3000 children are conceived each year in the USA by lesbians practicing SI (1993: 485). SI from 'street sources' puts these women at risk for disease transmission[5], as well as the increased possibility of accidents such as puncturing their uterus (Associated Press 1995: A17).

Unlike Canada and the United States, where there are no national regulations governing the use of new reproductive technology, the British Medical Association chose in 1979 to define explicitly who should (and thus who should not) have access to artificial insemination. Although these definitions were not legislative acts proposed to and approved by parliament, British physicians were considered to be professionally bound by them unless a legislative act contradicted them. The association's definitions were quite similar to the criteria by which American and Canadian physicians were choosing to work.

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[5] Donors to clinics are allegedly tested for diseases which are transmittable through semen prior to their first donation, and regularly as long as they continue to donate. The almost perfected 'art' of freezing semen has enabled clinics to freeze semen samples for 6 months, at which time the donor is tested again for various diseases. This time period is considered sufficient for incipient diseases, such as HIV, to manifest themselves. Such a screening process is impossible without a storage system, so women who make use of free-lance donors can only know that the donor does not currently test positive for various diseases.

It is worth noting, however, that although private clinics have the facilities to test semen, that many do not. A 1987 American study indicated only half of all doctors practicing AI were screening donors properly (Associated Press 1995: A17).

Artificial insemination was defined by the Association as being both medically and ethically appropriate when performed by a physician upon a married woman, whether it be AIH or AID. Although a doctor providing artificial insemination for an unmarried or otherwise 'unsuitable' woman was recognized as still performing a medical procedure, it was simultaneously labeled an **unethical** one - so it would be ethically inappropriate to provide such services to such women. To maintain control as the only legitimate servicers of the procedure, they also defined AI performed without a physician as an unethical and non-medical procedure (Pfeffer 1993:158-9). Declaring it non-medical meant that the participants were not legally protected from such possibilities as the donor being sued for child support, or the mother for custody. This act parallels the successfully lobbying by the American Medical Association in the early 20th century to legislate abortion limitations which served to assert that such procedures belonged only to their professional territory (Conrad and Schneider 1994: 170; see also a general discussion in Zola 1994)[6].

This is a clear example of what Henrietta Moore (1994) describes in her portrayal of the politics of needs, in which the players struggle to define the issues in such a manner that their position is inherently validated by the terms of the argument. I paraphrase Moore's components of negotiation as follows: i) The struggle to establish or deny the political status of a given need, so that it is recognized as requiring or not requiring debate; ii) The struggle to be the party who defines what the need is, as from the definition will come the criteria for determining whether the need has been satisfied; and iii) The contestation over whether the need has in fact been satisfied. (Moore 1994: 94-95).

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[6] The process of medicalization, of which the medical 'ownership' of the exclusive right to perform abortions or to legitimately perform AI are examples, is discussed in detail in chapter three, subheading 'The Tools of the Trade'.

The British physicians in the above case have been central agents in all three of these components. They have created definitions such that the request for AI by women who are not married is an inherently unethical one, which would logically result in such requests not deserving consideration. This serves to categorically deny the political status of claims made by single women that they have a right to the procedure as a legitimate grievance. By defining the only ethical usage of the practice to be its application to married women, the physicians act to define the need for AI as a 'marital issue', one which only legitimately occurs within the nuclear family. Thus, by servicing married women, they are defined as meeting the social need or demand for AI properly and fully.

Artificial Insemination "by Donor"

The second category of artificial insemination is labeled 'artificial insemination by donor' (AID), where the semen is usually either purchased (by a clinic or an individual) from a private sperm 'bank'[7], or else from a university hospital. Sperm banks purchase semen samples from men whose identity is typically not revealed to the purchasers or users of the semen. The 'tellers' at the bank typically catalogue the samples in terms of the donating man's skin colour, height, weight, eye colour, and other phenotypic characteristics, so that purchasing individuals can make a 'personalized' selection.

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[7] There are four private sperm banks in Canada. Most Canadian university hospitals also collect semen.

Certain American sperm banks offer a more 'specialized' sperm selection. California Cryobank is a good case, as the "sperm portfolios" which they include with their mail-order catalogues contain such data as the donor's GPA, SAT, and - if applicable - GRE, MCAT and LSAT scores. As well, one finds listed the donor's religion, ethnic background for 4 generations, favorite type of music, parents' occupations, sample essays on issues such as the donor's life ambitions and personal philosophy, as well as the results of a questionnaire which is expected to provide a reasonably accurate psychological profile (Rodrick 1994: D2). One can also pay for a private consultation, during which one can examine photographs of the donors.

Clearly, California Cryobank has found that the above listed criteria is relevant or somehow personally meaningful for their clients in making a 'sperm selection'. One informational tidbit which the company does not reveal to potential clients in its catalogue, however, is which pornographic video or magazine the donor selected to assist him in providing this Harvard educated, dog-loving, Zen-Buddhist, 'I want to be an astronaut', seminal fluid; or whether the man is married. There is no mention of the possibility of conceiving with a married man's sperm (and thus committing a rather dispassionate form of what could be considered by some to be adultery), nor of the manner in which those expensive vials are filled.

Such an incredible list of what is considered to be pertinent selection criteria is reminiscent of a very select dating service for one-night stands, or mail-order brides. It is also extremely insightful in terms of what people understand to be both desirable and inheritable characteristics - one can imagine the customers of this 'bank' planning their child's career long before that brown paper package even arrives in the mail, based upon the criteria listed in a glossy ad - the article does not specify whether there is a featured "sperm of the month", but it is certainly a possibility.

The credibility of such characterization lists perhaps rests upon a revival of the homunculi theory of procreation - that each sperm is actually a miniature man, complete but tiny, awaiting implantation in a womb where it can grow until it no longer needs a female incubator. Once born, the child can be socially imaged as his (mail-order) father's son, destined to follow in his footsteps, casting aside notions of socio-cultural or socio-economic factors being relevant in his development except as hindrances - the mother's genetic donation becomes somewhat invisible, or at least less relevant. Her role is to provide the environment - both *in utero* as well as post birth - where the child can reach his or her (genetically bestowed) potential.

Such a proposition is consistent with the argument put forward by Delaney (1986) in her discussion of paternity, published quite appropriately, in Man. She argues that Western notions of paternity and maternity are constructed within a specific theory of procreation, in which paternity is the primary and generative role. A synopsis of her argument is that the male contribution to a child is socially figured primarily as a biological one, of providing 'seminal' material, the seed which confers social potential as well as identity. Maternity, however, is defined in terms of birthing and nurturance, assisting the child to achieve the bestowed genetic potential. This is exemplified by the Biblical story of the Virgin birth, where Mary is revered not as a co-creator but rather as a nurturing vessel for a child who is 'his Father's son'. Such demonstrations, in beliefs in biological determination of social development and success, hint to deep-rooted and persistent faith in the philosophies of social Darwinism.

This desire to manipulate and carefully select genetic material so as to create the 'perfect child' is far from new in America. One of the more bizarre examples of faith in such practices can be found in the October, 1945 issue of The Sunday Dispatch. It announced that:

> A super race of test-tube[8] babies will become the guardians of atom-bomb secrets if a proposal presented today to President Truman [by the Military Affairs Committee of the House of Representatives] is passed into law. Fathers will be chosen by eugenic experts of the United Nations. The mothers will be hand-picked on their health and beauty records, family background and their achievements in school and university. The idea is to get the best possible brains in the world controlling future atomic power.
>
> (cited by Pfeffer 1993:115-16)

The criteria for mother selection described in the above citation strongly resembles the information requested from donors to the California Cryobank. It is not clear what criteria the United Nations would draw upon in their selection of appropriate men. Although the word 'eugenics' is not mentioned by the California Cryobank clinic, their work clearly has eugenic overtones, a terrifying philosophy which lost popularity in the United States (as well as most of Western Europe and Canada) during the Second World War.

The Adulterous Syringe and the Nature of Woman

These rather fascinating mail-order sperm superstores contribute to the fact that AID continues to be more controversial than AIH. This disparity in social debate has existed through European human AI history, as indicated by legislative debate and newspaper writing over the past few decades. AID is, however, currently perceived to be a generally acceptable practice: Britain does have many state-funded AIH/AID clinics (which service free-of-charge 'appropriate' women), and there has been no legislation passed banning mail-order 'do-it-yourself Mel Gibson' kits in the United States or Canada. This acceptance is perhaps a partial development of the AI demand 'boom' in the 1970s. AID has historically been seen as medically assisted adultery, which had the potential to create subhuman children, an understanding which is quite revealing with regards to the meanings of family and parenthood (Kimbrell 1993: 76).

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[8] 'Test-tube' here refers to the syringe used for artificial insemination. The phrase 'test-tube babies' is usually used now to refer (similarly misleadingly) to babies conceived through in vitro fertilization. This procedure usually involves conception in glass petri dishes (also not test-tubes).

The positioning of AID as adultery is evident from British debate of the 1940s, documented through correspondence and articles published in such places as the British Medical Journal. It was in the late 1930s that British physicians began to practice AID as a relatively common procedure (Pfeffer 1993:112). The practice was dubbed 'artificial' because a syringe, masturbation and a hospital bed were 'substituted' for the default 'natural' procreative characteristics of heterosexual intercourse in the marital bed.

It was believed by many that the manner of conception would determine the moral character of the child, just as customers of California Cryobank appear to hold the analogous belief that a man's preference for Bach is transferable through his sperm. Thus a child conceived through religiously sanctioned marital intercourse was a child with proper spirituality who would have appropriate spiritual and moral values. Children conceived through the use of a syringe were expected to "respect the values and ethics of a cold, inert, glass test tube" (Pfeffer 1993: 113). It is easy to see how the potential birth of such in-human children would incite moral panic, given this perspective on their essentially corrupted morality.

Those who were willing to participate in such a procedure were similarly subject to public moral condemnation. This is exampled in the responses by fellow physicians to an article in the British Medical Journal (Barton et al. 1945) detailing how to perform artificial insemination as well as how to determine who is a suitable sperm donor. Typical retorts were: "It seems quite clear that those who profess and call themselves Christians can have no part in the practice of extramarital artificial insemination" (Parsons 1945: 96), or "I take the strongest exception to the pages of B.M.J. being used to propound the pagan way of life" (Keane 1945: 165). This condemnation was facilitated by the public relations mistake of the century - war-related food shortages led to AI being publicly introduced into medicine and farming simultaneously, providing endless fodder for critics of the practice.

British citizens would have seen newspaper articles about women being successfully artificially inseminated along-side articles describing how beef output was being improved through stud farming, and that superior bull sperm would soon be available for all English cows (Walton 1958). Physicians practicing AID also made the mistake of themselves adopting the language of stud farming, as exampled by the statement that "considerations concerning the eugenic quality of the donors' *stock* will largely be governed by the scientific views ... of the physicians concerned" (Barton et al. 1945: 41, emphasis added). This sentence, although embedded in an article describing human artificial insemination, could just as easily be from an animal science article. Images of 'reducing' human procreation to the status of animal breeding, and the moral depravity which this implied, were thus constantly evoked by those opposed to the artificial insemination of women through the sperm of a stranger. For example, Walshe (1945: 165) wrote in the British Medical Journal that "The logical conclusion of this advocacy of artificial insemination is the human stud farm, with the making of a stud book, and the state registration of semen donors."

Physicians who arranged AID were accused of being ethically rootless, both by the public-at large as well as fellow physicians. They were accused of warping the morality of their clients, degrading medicine into a hedonistic practice, and acting in no greater capacity than as cattle breeders (Walshe 1945). "Surely it is a degradation," wrote physician Audrey Roberts, "and not a social advantage, to suggest that the population shall in future be organized into one vast stud farm?" (1945: 199). Donors were seen as depraved men, corrupted by having been paid to masturbate, despicable in that their social role was to act as a stud. Such rhetorical questions as "What type of individual can be the donor who hawks his seminal fluid round the countryside at so much per c.c.?" (Farquhar 1947: 826) are rampant in medical journals of the 1940s.

Women were excused somewhat for their demonstrated moral depravity in being willing to be impregnated by a stranger, on the basis of the social belief that women were incomplete if they did not have children. Motherhood was obviously the basis of what it means to be a woman. People drew upon such arguments, supported by the image of the nuclear family, and mothering the essential nature of woman, to advocate introducing the syringe as a third party to marital intimacies.

This same argument - that women are biologically doomed to crave motherhood - echoes through the debate to this day and thus is far from being a historical anomaly, restricted to a brief decade. Miall's (1993) findings in her recent Canadian study were that 87% of men surveyed indicated that they believed the desire for motherhood to be innate for women[9] (Miall 1993: 22). This belief also found its way into press releases by the 'Reproductive Rights and Reproductive Wrongs' conference held at the University of Victoria in 1994 (Lavoie 1994b). It is similarly a consideration mentioned in the Canadian Royal Commission Report on New Reproductive Technologies, published in 1993.

1940's understandings of biology led to some public sympathy for the husbands of these women who wanted AID, as their physical 'inadequacy' was seen to be at the root of the infertility problem. For the most part, however, they were perceived as men who were willing to be cuckolded, as AID was seen by many as nothing less than adultery - the manner of conception was irrelevant. Physician J. Rooth exemplifies this position in his assertion that "Surely, if a couple are prepared to accept the intervention of a third person it would be most natural to let this man operate in the natural way; *morally I can see no difference*" (1945: 165, emphasis added). This perception was reified by one of the recommendations put forward by the (British) Royal Commission on Marriage and Divorce, a commission formed in 1951 to investigate demands for changes to divorce laws.

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[9] Interestingly, only 55% of women surveyed felt that the desire for motherhood was innate for women. Clearly men and women have somewhat different opinions on what constitutes the essential nature of woman. More women also believed that the desire to father was learned, rather than innate (78%), compared to men (55%) (Miall 1993).

This commission had concluded that any woman who underwent the AID procedure without her husband's written permission was in fact guilty of having committed adultery (Pfeffer 1993: 120). The British courts, however, did not find this position tenable. A judgment was made in 1956 which was in direct contradiction with the recommendation. The case in point involved a Scottish man who filed for divorce, on the grounds that his wife had committed adultery when she was artificially inseminated by her physician without the permission of her husband. Although the first court granted the husband the divorce, upon appeal the decision was overturned.

It is not that surprising that AID was conflated with adultery, given that a child produced through AID would not be the biological child of the woman's husband. This observation led to great debate over whether such children were in fact legitimate and had the right to inherit from the mother's husband's estate, or could take his name (British Medical Journal 1947). This issue reveals something about the perceived importance of biological ties in constituting a legitimate family, although, as is described later in this chapter, biological arguments are often ignored if doing so better upholds the formation or constitution of a nuclear family.

A woman's biological tie to a child as his or her mother was and is proven by her having gestated and given birth to the child - a notion which is demonstrated today by the labeling of a woman who contracts out her womb to gestate a child being called a surrogate mother, regardless of whether the egg used to form the embryo was biologically hers or was removed from another woman's body. This nomenclature is especially intriguing given that the role which she is really fulfilling is that of a surrogate wife, in so far as she is carrying the biological child of the contracting man, so that he will have progeny to carry his name and inherit his estate. Labeling her a surrogate mother makes the relationship much less contentious and lessens the sense of the relationship being an adulterous one. It also recognizes the act of gestation as being a 'motherly' one. This perception is reified by the definition of what a 'mother' is in The British Human Fertilization and Embryology Act (1990), as is discussed below.

Legislating Legitimacy

British physicians recognized early in the practice of AID that they were assisting in creating children who could potentially suffer the social (and financial) stigma of illegitimacy, even though they were born to married women who had not had sexual intercourse with men other than their husbands. Interestingly, the physicians did not argue that the significant familial tie was a social one, manifested through kinship practices, which did not need to be 'biologically sanctioned' to be real. Nor did they argue that being medically inseminated by the sperm of another man did not constitute adultery, indeed, it was noted in a lead article of the British Medical Journal that "a donor commits adultery if his semen is used for AID" (British Medical Journal 1947: 606). Instead, they responded with legal and contractual practices designed to protect the interests of AID children as well as deflect the possibility of lawsuits being filed against them by a disowned child.

The Medical Defense Union, an organization which insures doctors against malpractice suits, took actions in 1944 that would protect the interests of AID children. This Union passed a regulation stating that physicians would only be insured if they made the husband of a woman who wished to undergo AID sign a set of consent forms.

These forms stated explicitly that any child born to the man's wife through AID would not be denied claims to any titles, estates, interests or funds (British Medical Journal 1947: 605-6). The response was thus one to curtail litigation against physicians by children who had been denied the benefits of having legitimate status due to their manner of conception. The children were placed in the position where the party to sue, if they were financially (which is really the equivalent of socially) disowned, would be their mother's husband.

The practice was also developed by mothers and their husbands of registering AID children as the progeny of the husband on their birth certificates, both as a social cover-up and to ensure that the child would be recognized as having a legitimate claim to their estate. This practice was and is illegal. The British birth registry was developed to provide incontrovertible evidence of a child's descent, legitimacy and nationality, as figured through biological ties. A couple who were discovered to have falsely listed such a husband as a biological parent were and are subject to heavy fines, for such an action makes the couple "infringe the Perjury Act, 1911, and become liable to a fine of £50 on summary conviction or seven years' penal service if convicted on indictment" (British Medical Journal 1947: 606). Thus the strongest family tie recognized by law involves the husband legally adopting his wife's child.

The issue of whether familial legitimacy and kinship bonds stem out of a social relationship (a child being nurtured and raised by adults) or out of a socially sanctioned biological one (a child having a biological relationship to two adults who are legally married at the time of his or her conception) appears to plague the reproductive technology debate to the present. It is my argument, however, that the debate is equally plagued by a limited cultural vision that sets the terms of what is proper and socially tenable on the basis of a rather restrictive notion of 'reproducing' the nuclear family.

Maintaining the Status Quo

It is perhaps in partial recognition of the potential vulnerability of AID children to be 'disowned' by their mother's husband that British physicians are to this day still asserting that they will only provide AID to women who they judge to be 'happily' married, or occasionally to women in long-term heterosexual relationships which they consider to be 'stable' (Pfeffer 1993:157).

However, given the increasing number of women who are not financially dependent upon husbands, and the legal necessity for couples to sign consent forms, this criteria of the physicians can no longer be seen as a response to protect themselves from being sued by children, nor to protect the children from finding themselves financially disowned. Rather, it is more easily seen as a reification (and medically authorized defense) of social values rooted in a belief in the immutability and social centrality of the nuclear family.

Britain is not alone in taking the nuclear family as its default, or 'natural' family unit. It is unclear how much of a role the definitions Miall (1993) used in her survey of Canadian public opinion regarding new reproductive technologies (NRT) played in the high level of rejection among respondents for allowing NRT access to single women or lesbian couples. All of her definitions of assisted reproductive practices - written copies of which were given to the surveyed individuals a few days before the interviews took place - are explained with reference to a married heterosexual couple. Women are always described as the 'wife'. A man is always present in the definition and is described as the woman's 'husband' (1993: 38-9).

None of the terminology is explained in terms of unmarried, single, or homosexual people. For example, AID is described as:

> [Sperm being] deposited by syringe into the **wife** of the **infertile couple** [although the 'wife' is not infertile, the 'couple' are defined in terms of her 'husband's' infertility]. The child produced with this technique is the biological child of the **wife** but is not biologically related to her **husband**.
>
> (Miall 1993: 38, emphasis added)

Clearly, such definitions - which may constitute the surveyed individual's first introduction to some of the procedures - are based upon the "traditional nuclear family" as the location for the practices. They definitionally exclude the possibility of women who request AID not being the 'wives' of infertile men. Having such procedures used on a non-wife and husband pair would involve an aberration from the definition, a possibility which is effectively precluded. This recalls Henrietta Moore's negotiating components, as described above, where one can control which interest groups have a legitimate claim to participate in the debate by setting the terms used to define the debate.

Thus, although practices such as AID have the potential to considerably alter family make-up, the actors involved in positions of power - such as physicians and legislators (and social scientists such as Miall in her rhetorical practices) - are all acting a manner which (either advertantly or inadvertently) serves to prevent social change. This is especially the case with regards to the social redefinition of 'family'.

Regulating kinship relations

Current British anthropological research on assisted reproduction is largely a response to public and parliamentary debate generated by the publication of The Warnock Report

(Warnock 1985), or to The British Human Fertilization and Embryology Act (1990). The Warnock Report was commissioned by the British government to make legislative recommendations regarding regulating assisted reproductive technologies and associated practices, especially in terms of embryo research. These reports are discussed in detail in the fourth chapter, with regards to *in vitro* fertilization. Of particular relevance for the issues currently under discussion are some of the definitions described in the Act.

Within The British Human Fertilization and Embryology Act, the terms 'mother' and 'father' are given legal definitions. This may be the first example in human history of a society faced with so much confusion about how its kinship system and social relationships functioned in practice, that it was felt necessary to legally codify the meaning of 'mother' within parliamentary acts. Section 27 of the Act tells us that when reproductive technology is made use of, a 'mother' is the woman who gestates the child, "whether or not the child is genetically hers". Section 28 specifies that 'father' refers to the husband of a married woman who carries the child "as long as he consented to the [seminal] donation".

The claim to motherhood of a child is thus created through the nine-month act of gestation, while fatherhood is a contractual and social agreement. Motherhood is earned through the biological act of a woman's body nourishing a developing fetus, while fatherhood rests upon the sanctity of property laws. It is somewhat surprising to see the 'motherhood equals nature' and 'fatherhood equals culture' formulas laid out so explicitly, and as the basis of actual social law.

Although the Act uses the language of the nuclear family to describe practices, it does not specify who may or may not receive infertility treatment. It also does not state under what circumstances AID would be 'unethical', unlike the British Medical Association's Act of 1979 described above. The role of ethical arbitrator was returned to the physicians, as it currently is in Canada and the United States. This allowed physicians to 'ethically' chose to provide AID services to women who are not married. However, following public uproar in Britain over a 21 year-old virgin woman giving birth to a child conceived through AID, the Department of Health announced that the Act would be amended to exclude such individuals from legally receiving services in the future (Reuter Newswire 1994b: A12). To my chagrin, I have found no references comparing this virgin birth to another which has historically been labeled a miracle and is associated with a major world religion.

The changes which the British Department of Health is proposing would serve to exclude single women and lesbians from receiving treatment, as only "families with a mother and a father" who were married would have access. A counter response has been mounted by homosexual lobby groups, who charge that such specifications create a discriminatory medical system (Reuter Newswire 1994b: A12). The specification within this definition of a mother and father being necessary for legitimate access returns us to the perpetually present heterosexual nuclear family, although it does imply that it is possible for there to be families which do not contain a mother and a father, as they are explicitly mentioned in terms of not qualifying for access.

Such country-wide regulations have not been adopted in the United States, where each state develops (or fails to develop) their own laws over such matters, a product of factors such as the absence of a national and centralized health care system. Thus, most practices come to be regulated only as a result of litigation. The legal precedent which is created may or may not be considered valid in other states, and may or may not lead to legislative bills being passed on the issue.

Although Canada could enact national legislation, and has commissioned reports to that end, it has not yet passed laws on new reproductive technologies. This is to the great dismay of Patricia Baird, who chaired the 1993 Royal Commission inquiry into new reproductive technologies. Since its publication, she has been cited on multiple occasions arguing that not passing policies will effectively sanction the dangerous possibility of adopting through default a very lenient policy, of market demand becoming the regulator of practices such as surrogate motherhood in Canada (for example, Canadian Press 1994a; Canadian Press 1994b: A4; Canadian Press 1994d: A4; Baird 1995: A22). Therefore, as in the U.S., the issues are also being fought out in court rooms, or decided upon by the personal preferences of physicians.

Thus, recent years have seen a variety of litigation suits which probably would not happen in Britain, where AI (when medically sanctioned) is free, and where numerous laws protect the participants. Litigation suits concerned with AI practices in North America are quite diverse. In December of 1993 a man who supplemented his income by free-lance sperm donating (through newspaper ads) was sued for paternity by a woman who had purchased semen from him. He was found to be responsible by an Indiana court to pay child support for a child conceived through AID with his semen, on the basis that he was the child's genetic progenitor, and regardless of the contractual understanding with which he sold the sperm (Kesterton 1994: A24). In this case, social/biological understandings of kinship links and their related obligations overrode the power of defining obligations through contract law. Thus husbands can be excused from social responsibilities to non-genetically related children if there is no contract (for otherwise there would be a violation of the marriage 'contract'), and donors can be forced to honour them even if there is contract denying the legitimacy of such a claim (for the biological 'contract' of paternity takes precedence).

A somewhat provocative case in Toronto involved a man being declared the legal father of a child conceived by his wife through AID. The unusual elements of this case are that the couple had separated before the child was born, and the mother did not believe that her ex-husband could make any claim of paternity for the AID child, as he bore no biological relationship with the child. One basis of the judgment in the ex-husband's favour was that if he was denied paternity, the child would "*suffer*" from not having a father (Editorial 1995: A22). His lack of biological connection - which is usually considered the primary basis of paternity - was considered irrelevant here, over-shadowed by perceived social need for this new-born to have a man be labeled his father and play the role of 'father' in his life. It is not at all clear whether, had the ex-husband chosen to deny paternity, the mother would have been able to charge him for child support (Fine 1995: A1). The notion that genetics determine paternity is ignored in this case, in direct contradiction with the Indiana case described above where a genetic connection forced a donor to acknowledge paternity. In each case what is produced is a nuclear family - or certainly the image of the nuclear family - although through discrepant and paradoxical reasoning.

A current case before the British Columbia Council of Human Rights was put forward by a lesbian couple against the physician Dr. Gerald Korn. Korn runs the only private sperm bank in British Columbia. Korn refused to treat either member of the couple as they were not heterosexual women. Had they sought treatment in Toronto, they would have found that several of the clinics there will serve lesbian women (Lavoie 1994a). The British Colombian Association of Physicians fully supports Korn as having the right to personally select to whom he will or will not provide AID services. Korn's decision was essentially one to deny these women the 'right' to be medically assisted, such that the precedent of forming a medically sanctioned other-than-nuclear family was precluded.

These sample cases point to comlex perceptions as to what constitutes legitimate claims to kinship - are they earned through biological links such as gestation and gamete donation coupled with legal contracts as the British seem to believe, or are they earned through social relationships and the 'need' for children to have fathers, as the Canadian courtcase described above indicates? They also suggest that Western people place a heavy cultural reliance upon centralized authorities to determine what constitutes proper social relations, particularly when the practices become somewhat fuzzy.

The consistent result in these appeals to authority is the legal preservation of the nuclear family as the only morally or legally appropriate family unit. Although it is acknowledged that other family types do exist (i.e. single mothers), the opinion is expressed repeatedly that children deserve - **or have the right to** - married heterosexual parents, who are preferably middle-class.

There is a general lack of consideration of different family types as possibly being healthy environments for raising children, a non-acknowledgment which facilitates its near-dogmatic imposition. The Vatican newspaper, in condemnatory response to the news that a physician had artificially inseminated a lesbian so that she and her female partner could raise a child, stated that:

> Every child has the **right** to be born into a regular family made up of a man and a woman. The child has the **right** to be conceived by the union of two human beings who love each other and make up a **nuclear family**.
>
> (cited by Reuter Newswire 1994a)

This sentiment is also expressed in the Canadian court case described above where an estranged husband won paternity rights to his ex-wife's AID child.

I believe that the social drive to maintain the nuclear family as the only officially socially sanctioned family unit is not the only major issue which discursively underlies and fuels the assisted reproductive technology debate. Others emerge once one begins to consider practices which involve the medical insertion of new steps or stages into human reproduction, like *in vitro* fertilization, or greater deviance from perceived natural family roles, such as surrogate motherhood. The next chapter examines ample evidence from the *in vitro* fertilization (IVF) debate, my focus being upon sorting through multiple tellings of what IVF 'really means'.

Chapter Three

In vitro Fertilization in the Academic Arena;

Or, Cultural Discourses, Ideological Rhetoric, and the Decentering of Feminist Positionalities

The previous chapter wrestled with public and policy oriented discursive practices and legislative statements with regards to artificial insemination (AI) practices in Britain, Canada and the United States. This involved engaging with both historical and contemporary positions, as represented through documentation such as British parliamentary acts, newspaper articles, and medical journals, as well as other sources. Out of these written sources it was possible to discern patterns of culturally entrenched premises, such as the primacy of nuclear families. These axiomatic premises, taken-for-granted assumptions which are usually only voiced indirectly or argued as truisms, underlay and made consistent seemingly disparate and contradictory positions. This was exampled by the interchangibility of arguments based upon genetic relationships with those of social relationship as the basis to make decisions regarding child custody and paternity suits - each being marshaled, or ignored, as would support the formation of a nuclear family in each case.

Like AI, the social and 'technical' understandings and meanings of *in vitro* fertilization (IVF) can be more fully understood through the unraveling and problematizing of the ideological premises and rhetorical practices which inform and shape its social positioning. This chapter will take as its central focus or medium of analysis *in vitro* fertilization, although other technologies and practices are not excluded from consideration where relevant. The first section will principally serve to lay out the groundwork necessary to engage in the critical discussions presented in the following section. It does so primarily by presenting IVF in terms of its historical development in coming to be regarded as a medical treatment, as well as touching upon issues of access, success rates, etc..

The subsequent section presents different feminist forms of cultural critique which have developed responses to IVF and its related practices. This section is specifically a consideration - informed largely by essentialist and constructivist feminist positions as well as by anthropological analyses of medicalization - of arguments concerning the politics of reproduction and choice in the context of assisted reproductive technologies. This includes an examination of the appropriation of rhetoric associated with women's rights groups by corporate entities, the meaning of medicalization in general and medicalizing conception in particular, as well as a consideration of whether it is justified to accept technologies as intrinsically 'value neutral'.

The material in the first section of this chapter will also be drawn upon in the following chapter, which discusses attempts made to assign a culturally legitimate and coherent understanding to embryos which exist in a state of disembodiment. That is, viable *in vitro* embryos which have not yet or **are not intended to be** placed within a woman's uterus for attempted implantation. This issue has attracted a great deal of attention in British anthropological circles (e.g. Shore 1992; Strathern 1992a, 1992b).

The discussion of IVF presented below is vital for an informed consideration of these feminist and anthropologically situated deliberations. The section opens by describing the medical procedures involved in IVF and introducing some of the medical terminology. Although I had originally intended to simply 'state the facts' (i.e. give a 'technical' description) in my presentation of this data, I found such an approach to be untenable.

To do so would be to artificially divorce IVF and its participants from the cultural contingencies in which it is real and thus realized. The more I researched the area the more violently aware I became that IVF does not happen outside of a lived context and should not be presented in a way which encourages such a consideration. It is something which is 'performed' upon women's bodies by physicians in a social/medical milieu where conditions have come into existence - both mechanical and cultural - to allow for, support, and even demand such a possibility.

The narrative below therefore slides between a mapping out 'of the facts' associated with or comprising the IVF procedure and brief discussions of the meaningfulness of those facts - especially in terms of their potential impact upon women undergoing IVF. Although this has lead to a certain artificiality in the flow of the text - from procedural description to critique to procedural description - it is necessary in terms of not doing an injustice to those upon whom the procedure has been performed.

Section One:

The Hows, Whys and Whens of Making an Experimental Procedure into a Medical Treatment

In vitro fertilization (IVF) is a considerably more complicated, invasive and expensive procedure than artificial insemination, yet - in cases where artificial insemination (AI) is also a physically (if perhaps not socially) viable option for attempting pregnancy - far less likely to result in a live birth. That is, approximately 6.9% versus 38%[1]. A more select group of people are allowed to attempt the procedure than AI, as it is extremely rare that physicians will accept unmarried women as clients[2]. The defining feature of IVF is that the technique allows for the insemination of ova outside of a woman's body, as opposed to in her fallopian tubes, where insemination usually occurs in heterosexual intercourse or with AI. Several of the resultant embryo(s), created *in vitro* , are 'replaced' into the woman's uterus where - ideally - they will implant and gestate.

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[1] See discussion of 'success' below, under subheading 'The Development of IVF as a Treatment'

Introducing *in vitro* Fertilization

The treatment itself commences with the woman whose ova are to be fertilized *in vitro* undergoing a hormonal drug regime. This serves to hyperstimulate her ovaries into maturing multiple ova simultaneously, instead of just one at a time. A Stanford University study published by the American Journal of Epidemiology cites that the three most commonly used 'superovulation' drugs in the United States are Pergonal, Serophene and Clomiphrene Citrate (Whittemore et al. 1992).

This article was a collaborative analysis of 12 studies of factors relating to the development of ovarian cancer. It concluded that women taking fertility drugs were 3 times more likely than other women with similar 'medical histories' to develop ovarian cancer if they did become pregnant, and an amazing 27 times more likely if they did not become pregnant following superovulation (Whittemore et al. 1992). The production of one mature ovum at a time (which most women's bodies are able to do without adverse side-effects or drugs) is deemed an inadequate number of ova for IVF to have any real likelihood of being successful. The surgical and expensive nature of each ova extraction combined with the low success rate of IVF (both are described below) provide further incentives to remove enough mature ova in one bout of surgery to allow for multiple IVF attempts utilizing multiple embryos. Thus the very method of IVF as it now stands has inherent to this pharmaceutical component of its treatment process the linked risk of inducing ovarian cancer - which could render a woman at a minimum unable to conceive with her own ova, and at a maximum dead.

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[2] See discussion of access below, in Part Two, subheading 'IVF and Access'.

Hyperstimulation induced by such drugs causes cells to divide rapidly (hence the links with cancer). This leads to multiple follicles and their associated ova maturing essentially simultaneously, instead of just one at a time. Following the drug regime, a woman's ova are ready to be 'harvested'. 'Harvesting' is the term sometimes used to describe the removal of a woman's ova in medical textbooks and journals (e.g. Edwards and Brody 1995). It is one of a multiplicity of terms which have been earmarked by feminist writers as indicating a certain objectifying or de-subjectifying tendency on the part of physicians towards the women they treat for infertility (Beagan 1989).

It is usually the case that a woman's ova are harvested through a 'laparoscopy'. A 'laparoscopic ovum collection' involves a physician inserting a laparoscope (a light guide) into a woman's abdomen, where a suction device 'harvests' her ova while her ovaries are held by forceps. The procedure involves abdominal incision, the use of general anesthesia, and the inflation of the woman's abdomen with the use of carbon dioxide gas (Raymond 1993: 211).

There are cases of 30 mature ova being harvested at once, but usually there are fewer, around 7 to 12 (Edwards and Brody 1995: 275, 268). A less widely used alternative to the laparoscopy procedure has been recently developed, where ova are collected by means of 'ultra-sound guided transvaginal aspiration' (Edwards and Brody 1995: 276-78). This procedure involves the ovum collection device entering the woman's body through her vagina and being guided through her body by an ultra-sound generated image. This eliminates the need for the woman being 'harvested' to undergo a laparoscopy. As no surgical incisions are necessary, the use of general anesthesia is also avoided (Robertson 1994:99).

Following the removal of the woman's ova, the physician(s) and researcher(s) involved will sort through them, selecting all which appear healthy to be fertilized *in vitro* (i.e. outside of the body, often in a sterile glass dish). Fertilization can be done using the sperm of the woman's partner (husband), or donated (purchased) sperm. If fertilization occurs, a one-cell zygote will probably form. The zygote then divides several times, producing an undifferentiated aggregate of 2, 4, 6 or 8 cells over just a few days.

Some 48 to 72 hours after conception - when the embryo has reached the 4,6, or 8 cell stage (there is no professional consensus as to what period of development is most likely to succeed), the physician will select 3 or 4 embryos which he or she judges to be the 'best ones' for placement into the woman's uterus where it is hoped they will implant. Ideally it is the case that after 6 to 9 days, the embryo will have developed to the stage where its outer layer may have begun to form a placenta, and thus can embed itself into the uterine wall. Around 12 to 16 days after conception, the embryo's inner layer reorganizes around the formation of an embryonic axis, along which the major organs and the structures of the body will be differentiated (Robertson 1994: 101).

The formation of this axis, also known as 'the primitive streak', provides a physiologically identifiable and thus categorizable marker in the continuous flow of microscopic cellular change which is recognized in embryonic development. This 'marker' has been selected as an extremely vital boundary. It has been used by several government bodies and medical groups to define when human life begins: or at least is close enough to counting as human life that genetic experimentation past this boundary has been declared unethical in the reports of several government and medical research committees (Warnock 1985; Royal Commission 1993; American Fertility Society 1986).

It is revealing to add that this physiological marker only 'theoretically' provides the threshold, as the language of proposed legislation has focused upon foreclosing research when the embryos are 14 days old. Although this is the average age at which the primitive streak develops, there is variation, with 12 and 16 days not being uncommon (Edwards and Brody 1995: 594). This means that one could still perform experiments upon embryos which have developed primitive streaks, as long as they are not yet 14 days old. The bestowing of such ambiguous meaningfulness upon the primitive streak, that it both is and is not the ultimate marker, is discussed with some depth in chapter four as indicative of the ambivalence expressed by legislators as to whether or not biologically-determined definitions are adequate for public policy formation.

The number of embryos chosen for attempted implantation is based upon a balancing of risk versus probability. The average number transplanted per attempt by American physicians is 3.5, according to reports from private clinics (Robertson 1994:99). The reasoning behind implanting a greater number of embryos than the woman actually wants to or can safely gestate is to cover the risk of failure entailed by the fact that any given embryo may not implant. The use of multiple embryos is expected to increase the likelihood of any pregnancy at all occurring.

The number is usually limited to 3 or 4 embryos, so as to control the likelihood and severity of the implanted woman experiencing a dangerous multiple pregnancy. A multiple pregnancy is considered by physicians to be undesirable due to the associated risks of all fetuses being born too prematurely to survive, miscarrying, having multiple and severe birth defects, etc.[3] (Robertson 1994: 98-99). Thus, physicians set the number of 3 or 4 embryos as a reasonable gamble that at least one - but not too many - will implant.

In cases of multiple pregnancies, women are counseled to practice 'selective reduction' (Raymond 1993: 130). This is not an uncommon development, occurring at a rate of 20 to 27 times higher with IVF than with 'traditionally' conceived pregnancies (Canadian Nurses Association 1990: 10), or approximately 30% of all IVF pregnancies where 3 embryos are 'reintroduced' (Edwards and Brody 1995: 498). Selective reduction is also known as 'selective feticide' and 'selective birth'. Clearly these two terms in particular have great rhetorical power, indicating an inherent moral approval or disapproval for the procedure. One equates the practice with the murder of a fetus, the other erases the existence of anything but the remaining fetuses which are now expected (or hoped) to be viable.

The selective reduction procedure can take several forms. In second trimester pregnancies, a physician may use ultrasound to guide the injection of a toxic drug, such as potassium chloride, into the hearts of all the 'excess' fetuses. In technical terms, death is said in such cases to be caused by 'heart failure' (Raymond 1993:130). The woman in whose womb fetuses have 'been reduced' continues to carry the fetal matter, as "[t]he dead fetuses are compressed by the growing ones, and delivered with the placenta" (Price 1992: 109). In 'reductions' performed earlier (eg. eight weeks after implantation), the physician may use a suction method (Edwards and Brody 1995: 636-38).

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[3] Price's interviews (1992) with IVF mothers of triplets indicates that those women who did not 'reduce' (abort) the 'extra' fetuses were having extreme difficulty dealing with 3 infants simultaneously, and had not expected this outcome. However, for some, the notion of aborting the 'extra' fetuses due to being too pregnant was intellectually incompatible with the trials they underwent in becoming pregnant, or with personal values.

It is somewhat misleading to allow the description of multiple pregnancies and the subsequent need for selective reduction as 'side-effects'. The potential for multiple pregnancies is really a direct effect of the treatment itself, given that multiple embryos are intended from the outset to be placed in the uterus with the knowledge that all could implant[4]. The morbid risks of this procedure include uterine bleeding and infection, which can lead to danger for the woman herself, as well as premature labour and the loss of all fetuses. Once again, a not unexpected effect of the procedure could render the woman undergoing IVF unable to carry any children at all. Uterine bleeding can also cause neurological damage to the fetuses which were not 'reduced' (Raymond 1993:131)

All the remaining unimplanted embryos, as well as ovum which were not selected for fertilization, may have a number of different fates. The two most obvious fates are that the woman from whom the ovum were extracted may have the resultant embryos frozen for later IVF attempts, or they may be donated to other women for attempted implantation in their wombs. A third option is that they may be destroyed (Robertson 1994: 8-9).

Other fates within the laboratory involve the ova being used for genetic research (which in some cases may not legally require the woman's permission - see Radke 1992c:52). Such research could include: attempts at altering gene structure; preimplantation repair of genetic abnormalities; and preimplantation screening for chromosomal abnormalities/genetic defects (Blank 1990: 68). Blank further suggests the clinical applications of: developing and testing contraceptives; investigating abnormal cell growth; determining certain causes of cancer; and studying the development of chromosomal abnormalities (1990:68).

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[4] The same is true for superovulation drugs, which cause a woman's body to mature and release multiple ova simultaneously. This increases the likelihood of impregnation while also increasing the likelihood of multiple pregnancies. This is not a 'side-effect' but rather a possible direct outcome.

A final option not listed in academic sources is the trading - not of the extra embryos but of the unfertilized eggs - in lieu of paying for the procedure. This second option is common to several IVF clinics in Toronto. These clinics offer free IVF treatment to women who agree in advance that they will 'donate' half the ova extracted from their bodies for the use of other women (couples) (Canadian Press 1994c; 1994e). The woman who receives the ova (needed because she is unable to produce viable ova) is charged twice the fee for IVF services.

The infertile woman, in such a case, could be said to be essentially purchasing the 'raw materials' and covering the costs associated with their retrieval. It must not be forgotten, however, that the raw materials are sex cells 'harvested' from the other woman's body, and the retrieval is a laparoscopy. The fertile woman may be 'donating' these ova out of goodwill, but also may have no choice about trading part of her body if she is to afford the treatment. It is intriguing that these clinics have managed to make the purchase and selling of human tissue legally permissible, simply by using the word 'donation', and recognizing that there is both a supply and demand which can be tapped. Debates concerning the moral and legal status of 'extra' embryos (i.e. are they person or property, tissue sample or member of kinship network) are central to the next chapter.

The IVF technique is not one without risks to the woman upon whose body it is performed. Most of the 'technological' stages have the potential to irreparably damage her body. The philosophy and practice of creating extra - superovulating to have 'extra' ovum; fertilizing all ovum to have 'extra' embryos; implanting 'extra' embryos; and finally having to terminate the 'extra' fetuses - create questions. A concern raised by this routine production of 'extras' is: Why is the procedure so loose, with so much uncertainty as to what is necessary for the woman in question to have a child with this procedure, that back-ups are created at every step of the way at risk to her person as well as any fetuses which may develop? Other questions come easily to mind: Why are physicians offering IVF if they have not done sufficient research to even know at what developmental stage (2,4, or 8 cells) the embryo should be transplanted? Why are women agreeing and, in fact, **demanding** the 'right', to undergo IVF? And, finally: Given the above, how is it that IVF is considered to be a medical treatment instead of an experimental procedure?

The Development of IVF as a Treatment

IVF was originally developed in the late 1970's as a form of assisted conception for women whose wombs were healthy and whose ovaries matured ova normally, but whose fallopian tubes were malformed or became damaged such that the woman's ova were unable to pass through the tubes, making fertilization virtually impossible. This damage may have been caused for any number of reasons, not uncommon ones including pelvic inflammatory disease caused by a medically prescribed intrauterine device, sexually transmitted diseases, cancer and/or its treatment, and infections following surgical procedures (Edwards and Brody 1995: 198-200; Hubbard 1990: 204; Kimbrell 1993: 69-70).

However, in current North American practice, only about 50% of IVF procedures are performed in cases of damaged or malformed fallopian tubes (McInnes 1994: A7). It has come to be used for multiple reasons and in multiple situations. One is surrogate motherhood, where a woman may be contracted to carry to term a child who is the genetic product of the contracting couple - the female of whom has had her ovum 'harvested' for the procedure[5].

Other situations where IVF is used include 'unexplained infertility'[6], ovulation defects where ovum naturally mature but are not being released into the fallopian tubes, and endometriosis[7]. It is also sometimes used as a second resort if AIH (artificial insemination by husband) fails before trying AID (artificial insemination by donor), as IVF requires a much smaller quantity of sperm than does AIH. It can also be combined with procedures where the ova's wall is punctured and a single sperm injected, or the ova's wall is otherwise chemically weakened to facilitate the penetration of a woman's male partner's[8] 'weak' sperm (Robertson 1994: 8-9; Royal Commission 1993: 498; Blank 1990: 103).

The first birth of an IVF baby was in 1978 in Britain. This event was the product of private enterprise, as Dr. Steptoe and Dr. Edwards, the two physician/medical researchers who performed the procedure, were denied government funding for their project. The British Medical Research Council refused their grant application on the grounds that the project was unethical. The specific source of contention was the laparoscopy procedure. The Research Council found that it had not been tested sufficiently, and so would not support its proposed use upon women's bodies (Edwards and Brody 1995:27). They

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[5] However, the more common procedure for surrogate motherhood is AI, where the fetus the surrogate mother carries is generated through her being artificially inseminated with the sperm of the contracting man.

[6] 'Unexplained infertility' is the label applied when physicians can determine no physiological reason for why a woman has not become pregnant over a period of at least one year or two years - the time period varies depending upon the country or diagnosing physician - of regular heterosexual intercourse without contraception.

[7] Endometriosis is a disease, symptoms of which include uterine tissue lodging in the ovaries and fallopian tubes, as well as the formation of uterine cysts (Edwards and Brody 1995: 218).

[8] In practice, 'male partner' means husband, as physicians will not usually agree to perform IVF upon an unmarried woman. This is described below in a discussion of access.

requested that Steptoe and Edwards carry out a series of tests on rhesus monkeys before attempting to work on human bodies. This judgment and recommendation did not mean that Steptoe and Edwards could not proceed with testing their procedure on women, only that they had to do so with private monies.

British medical journals similarly refused to publish their preliminary findings (Edwards and Brody 1995:27). Once again the reason was that the experiments were judged to be poorly researched and not medically sound (Pfeffer 1993: 165). However, when Steptoe and Edwards 'created' an IVF baby and the media declared their work 'miraculous', the British medical establishment publicly acknowledged their work and began to support such research. They no longer asked for further animal research and procedural development, even though the laparoscopic procedure remained as it was when they had rejected Steptoe and Edward's work as not medically sound and too experimental.

The single live birth in Britain was followed by the quick adoption of the procedure in the United States and Canada. The first IVF baby to be born in the United States was in 1981. In Canada, twin IVF boys were born in 1982, although they had been conceived in England. The first IVF children who were conceived in Canada were born in 1983 in Vancouver. In both of the Canadian cases, the births were of multiple children. As explained earlier, the IVF procedure with several embryos introduced to the woman's body, makes multiple births extremely likely, in cases where there is a successful pregnancy.

Although irregularities in record keeping make it impossible to directly compare data by years, one can still gather that the use of the procedure has snowballed in the United States. In 1986 there were 2364 IVF procedures performed (and an unknown number of babies born), while in 1988 data indicates that 4,000 IVF babies had been born (although an unknown number of procedures) (Blank 1990: 30). The 1986 data reports there to have been 485 pregnancies, a success rate of 16.9% . However, this success rate is difficult to assign meaning to, in that the recording of a pregnancy does not indicate a live birth or even what many woman would consider to be a 'pregnancy'.

Statistics for success rates may be defined by clinics on whatever basis the clinic finds relevant for their purposes. For example, a clinic may decide to use a ratio based upon the number of successful implantations. Implantations have never corresponded with live births, and with IVF the risk of miscarriage following implantation is 2 to 3 times higher than with 'traditional' pregnancies or AI. Clinics regularly rely upon a success count of 'chemical pregnancies', the recording of changed hormone levels in a woman's body, which may indicate pregnancy but are frequently false positives. Other methods for counting 'success' include the hearing of a fetal heartbeat (detectable 4 weeks after conception), the total number of babies born (dead or alive - bearing in mind that multiple pregnancies occur at an extremely high rate), or as the number of couples who leave the hospital with one or more babies (Raymond 1993: xiv, 11).

Thus, one Toronto clinic claimed and publicly advertised a success rate of 41% after having only been opened for 5 months (Basen and Mulay 1994: A21). A 1989 American study estimated that fewer than half of the 169 IVF clinics operating in the USA at that time had ever produced a live baby, yet on average were advertising success rates around 25 to 30% (Caplan 1990:159)!

It is clear that success for a woman undergoing IVF is only understood as being attained through a live birth, not through the creation of an embryo in a laboratory or by 'achieving' a chemical pregnancy. Thus, physicians or clinics using such criteria to measure and advertise 'success' are either questing for a goal which is not shared with their clients or else are intentionally misleading people so as to bring in business. From this data it would appear that physicians are for the most part trying to create pregnancies, which can be judged to exist through a variety of categories, while the clients/patients are wanting to create - not just pregnancies - but babies. This opens once again the question of whether IVF is a medical treatment to assist in having a child as it is commonly perceived, or an experimentai procedure, operating under the guise and rhetoric of a medical treatment. If the later is the case, then people are not only unwittingly applying and demanding to be experimental subjects but also cover the costs incurred for the research project.

Those 4,000 babies born in 1988 indicate that there is a public demand for IVF. Although IVF was covered by provincial health care programs in British Colombia and Ontario, both provinces have removed this procedure from their lists of covered services. These decisions were based upon studies indicating that its success rate (in terms of live babies) is too low for it to be considered anything but experimental (Canadian Press 1994f; Lavoie 1994c) However, the demand for IVF is high enough that it has supported the opening of several private IVF clinics in Canada, as well as a few university-based clinics. The motivation for physicians to sell a treatment declared 'experimental' is clearly multi-factored and may well involve values such as altruism - wanting to help people live the life path they had expected but are not achieving. However, some argue that primary motivations may also include the lure of technological intervention into a previously unmedicalized domain (considered in Section Two below) or financial gain.

IVF is not an inexpensive procedure. As it is not covered by provincial health care due to its designation as 'experimental', each attempt in Canada may cost a woman $5,200 (Canadian Nurses Association 1990:6). In the United States the fees are higher, at $5,000 to $7,000 US per cycle of ova extraction and implantation (Robertson 1994:99).

Obviously costs would be lower if enough ova were extracted in one laparoscopy for multiple attempts. The fact that people are willing to pay these fees indicates something of the desire these individuals have for biologically related children, as well as their socio-economic class.

Although IVF is practiced in Canada, there are no laws governing its use or the contingencies which it creates. Should it be legal at all? Should it be legal for women to sell their ova, as is indirectly practiced in the United States[9]? Who 'owns' the *in vitro* embryo - the physician, the clinic, the 'mother', or the 'father'? The second question has been the source of two high profile law suits in the United States: one being divorce proceedings where custody of seven frozen embryos was disputed, the other being a couple suing a clinic which would not allow them to transfer the frozen embryos to another clinic (Kimbrell 1993: 92-98). Five American states have passed laws specifically dealing with IVF, among them only Louisiana recognizes the *in vitro* embryo as juridical person (i.e. it can inherit, if born). Other states have laws on some aspects of IVF (eg. eight states forbid the donation of embryos for research) (Kimbrell 1993: 90). Overall, the situation is extremely varied or completely unregulated.

Much of the feminist-based criticism of IVF has arisen in response to the fact that many women (couples) undergo the IVF procedure for reasons which may be or are linked to male infertility, as listed above, instead of because the woman could not otherwise conceive (Strickler 1992). In fact, Edwards and Brody herald IVF in their medical textbook on assisted reproduction as 'the cure' for alleviating many forms of what is diagnosed as male infertility (1995:372). The extremely low success rates combined with 'side-effects' which could render infertile (or otherwise unable to carry a child) a woman whose reproductive system was healthy, make choosing such a 'solution' or 'cure' very questionable. IVF is in such cases practiced in a risky yet unlikely last ditch attempt to make any child the woman gives birth to the genetic progeny of her husband. Her undergoing a drug regime and surgery is positioned and understood by some as a reasonable price/gamble for the opportunity for her partner to have this genetic link to her offspring.

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[9] As it is illegal to sell body parts in the US, the selling of ova is made legally possible by describing the financial transaction as being compensation for the inconvenience of undergoing a laparoscopy and taking superovulation drugs. Kimbrell describes American IVF clinics as successfully targeting female university students as willing to trade ova for cash so as to finance their education (Kimbrell 1993:83-85). IVF America, an IVF corporation which expects to open franchises all over the USA, publishes ads in university newspapers offering women $2,000 per extraction. Kimbrell also notes that female university students, as well as low-income single mothers, have been targeted as a pool for surrogate motherhood candidates (1993: 104-6).

This choice is made despite the success rate (in terms of couples who leave the hospital with one or more live babies) for IVF being extremely low (averaging 6.9% in North America), while AI success rates are listed at being reasonably high, at 38% (Kimbrell 1993: 72)[10]. One Australian government report analyzing 10 years of IVF practice concluded that there are no indications that IVF has a higher success rate than the absence of all treatment, as 25 to 60% of couples who attend infertility clinics have a child 'naturally' - either after giving up or while waiting for their turn (CRIAW 1989:20; Batemen 1988). This data supports an argument that many couples have been mislead into looking for a technological fix for a problem that was created through the medicalization of not having become pregnant after a year of intercourse without contraception, a state which is defined as 'suffering from infertility'.

The situation is not so simple as to be explained by 'false advertising', but, I will argue, is somewhat tied up in the strategic deployment of rhetoric. How can it make sense that women (or couples) are choosing to try IVF? That women are choosing to take superovulation drugs? It is the placement of women as subjects and agents in making such choices while operating within the larger cultural context which provides the focus of the next section.

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[10] Clearly, such a comparison is most valid in the estimated 50% of IVF treatments which are performed upon women who have healthy fallopian tubes, for whom AI is a physiologically if not socially viable option.

Section Two

The Knowing and Making of Subjects, Objects and Society: Women's Agency, Choice and Technology

The data discussed in Part One of this chapter positioned making the choice to undergo IVF a rather questionable one, especially when other options to have children were available. However, the data also indicated that the demand for IVF is high. Both observations can be seen to make sense by interrogating the nature of the desire which informs such choicemaking, and by situating the desire within a critical and politicized framework which engages with the social meaning of IVF.

An understanding of the social meaning of IVF requires foremost an understanding of the nature of 'choice' for women who request IVF. Also important is the consideration of dynamics in which physicians offer services that are unlikely to produce the result desired by the couple (i.e. a child) and which simultaneously carry some danger for the woman undergoing the treatment. As noted in the following discussion, there is a considerable academic and advocacy literature representing 'women' on these issues. Before considering that, however, a brief description of the 'sorts' of women in current North American practices who are allowed access to IVF by physicians/clinics is presented.

This question of access helps to contextualize the issues around the matter of who counts in medical discourse and practice as a culturally legitimate candidate for IVF.

IVF and Access

The individuals who are accepted by IVF clinics mirror those who have easy access to artificial insemination (AI) clinics in several ways. Like AI, access to IVF is unregulated in Canada and the US, though semi-regulated in Britain. Thus, in North America, the decision as to who is accepted for IVF treatment is physician or clinic specific. Blank's survey (1990) indicated that physician-imposed selection criteria common to American clinics include the following: only male-female couples; the couple must be legally married; the couple must be of the same 'race'; the woman must be under 35 years of age (although in practice a significant number exceed this criteria by accepting women up to age 40); the infertility is not correctable by surgery (i.e. upon the woman's fallopian tubes); and, any woman ova 'donor' should ideally have a regular menstrual cycle; normal uterus and ovaries, and no physiological characteristics which would make laparoscopy difficult (Blank 1990:65). To this list Robertson adds that most American clinics test both individuals for HIV. If either test positive, the couple is denied IVF treatment (1994:117). There are, of course, physicians who follow a less strict (and less normative) set of selection criteria, notably those in university-affiliated hospital and clinic settings, as described in Chapter Two, footnote 4.

The Royal Commission's surveys of Canadian clinics revealed a similar pattern in that Canadian physicians will usually only perform IVF upon women who they judge to be in a stable, long-term, heterosexual, middle-class relationship, provided that they can afford the expense. The Royal Commission Report (1993), which recommended strongly against such socially derived discriminatory access practices, observed that current practice is such that:

> [To qualify] IVF candidates must conform to the stereotypical notions of what kind of woman makes a good mother. Women with disabilities and lesbians do not quite fit this conception of the ideal wife and mother.
>
> (Royal Commission 1993: 39)

I have already discussed at length with regard to AI that the manner in which the procedure is administered serves to create a process of exclusion and inclusion, predicated upon naturalized expectations to reproduce the nuclear family[11]. I will not repeat this discussion here beyond noting that there is evidence that IVF practices indicate a similar pattern. As Hartouni (1994: 87) observes, although new reproductive technologies have the **potential** to either force open or foreclose discussion, they seem most likely to be used or understood simply to reproduce the status quo.

Society, Biology and Technology in the Politics of Assisted Reproduction

Hartouni's observation is echoed by concerns expressed by several academically-based feminists[12] who similarly do not see assisted reproduction as lending itself intrinsically to social change, especially with regard to bettering the general state of women in North

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[11] See Chapter Two.

[12] For purposes of this discussion, and in the interest of syntactic simplicity, I will be making generalizations about 'types' of feminism, namely constructivist, essentialist and liberal, and presenting each as though within the 'types' named there is consensus over the issues referred to. I rely for my general understandings of these feminisms most heavily upon Hubbard (1990), Raymond (1993), Harowski (1990), Strickler (1992), Franklin (1990) and Epstein (1988), several of whom explicitly compare feminist positions and approaches. I have cited each when specifically appropriate.

American society. A consideration of the politics of technology benefits from the contestations and de-naturalization discourses brought forth within the different feminist arenas. This is especially so when the technology under consideration has particular ramifications for a gendered female audience.

In the discussion of IVF below, I will for convenience be assigning feminist-based concerns to one of three general categories: essentialist, liberal, and constructivist. This assigning of positions to categories as if they were in fact discrete classes with little slippage between or within them, while certainly a simplification, is intended to facilitate an understanding of the broader issues surrounding assisted reproduction, and as such, should not be taken as a thorough interrogation or explication of these feminisms.

I will be referencing the 'constructivist feminist position' as centering around a set of two critiques which highlight social values and norms as culturally and historically specific designations which are deployed as instruments of control. The first critique is that when women consent to or request the IVF procedure, they are supporting and reifying a constructed social belief that women have a biological need to be mothers, a belief which has historically provided justification for limiting women's social opportunities. The second critique is that some women may not be in a position which supports making any other choice than to proceed with IVF, given the constraints of the social context in which the decision is made.

Those positions which I précis as essentialist feminist ones take men and women as being essentially different and thus having intrinsically different bases of social power. From them I consider a critique which specifically engages with the medicalization of conception as serving to dis-empower women by 'handing over' a female base of power to what is perceived of as a male institution (Strickler 1992:120). Liberal feminism entails an emphasis on individualism and the valuing of women's autonomous agency to make personal choices for themselves. Thus it can be argued as lending qualified support to IVF.

I will commence with a brief discussion of social understandings of technology in general and will then scrutinize the process of medicalization. Following this discussion of technology and medicalization, attention is paid to the rhetoric and meaning of 'choice'. The section will close with some deliberations on what Sarah Franklin refers to as 'the desperation of the infertile', in her 1992 discursive analysis of the phenomena, and a re-figuring of how to position medicalization given the material discussed. Throughout this section, I will reference cultural practices and perspectives (both potential and realized) which are 'by-products' of the development of assisted reproductive technologies. However, the focus will remain assisted reproductive practices, specifically IVF.

The Tools of the Trade

The dominant Euro-American understanding of technology is as a tool or knowledge created to solve a specific problem or meet a specific need (Harowski 1990: 132)[13]. This understanding parallels and complements the pathogen model of illness, where each 'illness' has a specific and knowable cause and therefore a specific and knowable cure. It has historically formed the basis for much of the philosophy of biomedical practice (Gordon 1988). The pathogen model has also facilitated the medicalization of previously 'social issues', by locating some feature which could be argued to be a physiological trigger, cause or component.

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[13] For my purposes in this text, I use the term technology to refer to materially enabled knowledge.

Medicalization, reduced to its most simple definition, refers to two interrelated processes which can occur at a variety of levels. One process involves certain behaviours, conditions or experiences being given medical meaning - they are redefined in terms of their being an aspect of health or illness, as opposed to, for example, a social issue. The second is that medical practice becomes a vehicle for eliminating or controlling experiences which are defined by a group in power (perhaps at the request of a less powerful group) as deviant or socially undesirable. Each of these processes serve to increase what is considered the rightful domain of biomedicine.

Medicalization occurs at several levels. Conceptually it occurs when medical language is used to define a problem (or something **as** a problem). Institutionally it occurs when physicians legitimate a medical treatment program by engaging in it or enacting it. On the inter-subjective level, it occurs when a doctor and a lay person (whose role is medicalized as 'patient') requesting a consultation interact, and a diagnosis and treatment are given (Conrad and Schneider 1980; Reissman 1993). By locating a source in or of the body, a biomedical claim is created de facto upon any such bodies which can be argued to have that feature.

Within this perspective, "science as an institution and the scientific experts are assumed to be neutral sources of authority" (Raymond 1993: 125). This serves to render both the human practitioners and physical apparatus of biomedicine within the powerful conceptual category of operating in a dispassionate framework, such that it could be believed that only those things which truly ought to be medicalized will in fact be medicalized, due to the objective nature of medical science research methodology. There are many persuasive arguments that the creation of this perspective as a near axiomatic social belief is a primary source of biomedicine's authoritative status and power. Conrad and Schneider (1994) provide a concise history of the growth of biomedical authority in the United States by detailing the manner in which its monopoly over certain life processes as medicalized states was established in the early twentieth century.

More general and seminal are Foucault's works in which he links the production of certain bodies of knowledge and their technologies with the regulation of certain individual human bodies through a process of medicalization (1973a; 1975). These analyses are not restricted to the social institutions and their practitioners, but include considerations of the physical technology itself. Procreative technologies, like all complicated technologies, are not beyond the reach of moral criticism. As Ginsburg and Rapp argue, "no technology can be understood apart from culture, history and power" (1995: 291). It is not simply the manner in which they are deployed that should be considered in evaluations of whether they are oppressive or liberating (e.g. thalidomide and diethylstilbestrol (DES)). Nor, of course, are the alleged needs which they serve or the purported problems which they solve beyond criticism. Indeed the technology itself should be subjected to such criticisms.

The very existence of a technology or 'treatment' implicates a network of those who support its use - in the case of medical pharmaceuticals, for example, there is an indisputable motivation of financial gain which leads to producers doing amazing give-aways to physicians of products (e.g. computers, drug samples, and notepads) to promote name recognition in prescribing practices (MacIntosh 1995). Marketing rhetoric is designed to create or position the product or service as allegedly fulfilling a social or 'medical' demand (eg. see discussion below of breast implants).

Eugene Brody's study, "Human Rights Aspects in Transactions in Body Parts and Human Fetuses" (1990), commissioned by UNESCO, argued that doctors are not dispassionate observers but rather strong advocates of the technologies in which they specialize. He attributes this advocacy both to the wish to avoid failure in curing the perceived disease, as well as to factors such as the augmenting of professional prestige, and sometimes to see simply if the treatment will actually work:

> As part of a technological 'subculture of objectivity' many [physicians] feel a moral imperative to use all available new technologies with their patients while ***others admit the lure of using them to bring new excitement to their practices.***
>
> (Brody 1990: 40, emphasis added)

Brody is not alone in isolating these motivations. His findings are supported by those of Strickler. Strickler (1992: 123) links assisted reproductive medicine with the opportunity for professional prestige and "exciting research" in an area of specialization (obstetrics) which was low prestige and whose demand - due to declining North American birthrates - was decreasing. Strickler also interprets physicians' frustration with failure as leading them to encourage couples to pursue whatever treatment exists, "to the extent of repeating procedures which have been tried without success" (1992:115). There is the further consideration that those who operate, control, prescribe and so, at least implicitly, support the technologies of assisted reproduction bring with them a sense of privileged authority and security that is presumed to go with their position as 'expert'.

Medicalization

Most of the assisted reproductive technologies can only be accessed or made use of with the approval and involvement of biomedically accredited experts, and thus only in compliance with the values and agendas held by those individuals in these decision-making positions[14]. This is an obvious observation with regard to such practices as

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IVF, but not so obvious for artificial insemination by donor (AID). As individual women can self-inseminate (SI) by obtaining sperm through an American mail-order sperm bank or from an acquaintance, it appears on the surface that there need not be an expert mediating the procedure. As was described in detail in Chapter Two, however, AID without a physician present is not considered to be a medical procedure.

I will briefly reiterate the elements of the discussion of self-insemination which are relevant for the issues under consideration[15]. Self-insemination (SI), having been declared a non-medical practice, does not carry the same legislated protections in the United States and Britain as those associated with artificial insemination mediated by a physician. As such, and regardless of any contract signed, the sperm donor will be in the position to legitimately claim paternity or alternately be charged with it (along with its financial obligations) if either party chooses to take such an action. These claims are by legal definition denied when a physician administers the procedure.

As well, in the case of sperm purchased directly, the purchasing woman will not be able to screen the donor's blood or semen sample for genetic defects or disease. The only way a woman can ensure that the sperm donor cannot claim the child and also be protected from possible disease, is by working under the auspices of the medical profession - if its members will accept her as a patient. Thus, in a case where the physical technology and procedure do not technically demand expert involvement, issues of legal protection and personal health risks ensure a near medical monopoly by mitigating against the choice to practice self-insemination.

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[14] This has been argued at length above for both AI (in Chapter Two) and IVF (in this chapter).

[15] See Chapter Two for the complete discussion from which these elements are extracted.

IVF was developed to make use of a specific set of procedures and a specific physical technology. The very nature of these procedures and technologies are such that lay people cannot access, use, or perhaps even evaluate the risks of them without the involvement of a trained professional. This dependence upon medical experts to explain assisted reproductive techniques as well as to declare one 'infertile' means that "the public perception of NRTs [new reproductive technologies] as therapeutic and benevolent is based primarily on meanings and interpretations provided by their (mostly male) creators and practitioners" (Beagan 1989: 5), who have a vested interest in promoting their use. Hubbard comments that:

> In this society a need for professionals means that the technology is expensive and introduces differences in power between those who administer it and the users.
>
> (Hubbard 1990: 144)

The perceived creation of this power dynamic in what was previously a largely unmedicalized domain (i.e. the conception of an embryo), has met with strong opposition. One opposing position is ascribable to essentialist feminism, which figures women as essentially different from men, both physiologically and psychologically. It is understood that female empowerment is rooted in these differences and that from them it can be activated. Within this position the desire to 'mother' is valued, its social devaluation positioned as a patriarchial attempt to alienate women from their inherent power sources (Strickler 1992). Similarly, physiological abilities such as being able to gestate, give birth, and suckle babies are taken both as sources and manifestations of a biologically entrenched power base, through which women are enabled as fully subjectified agents. Although motherhood is taken to be essentially 'empowering', essentialist feminists do not support the practice of IVF.

Essentialist feminists position a technological mediation of conception - where women are not in the position to self-administer the technique and therefore unable to exercise some degree of control over conception - as serving to usurp this major source of potential female power. Supporting a 'male dominated medical profession' (Strickler 1992:120; Beagan 1989:5) in staking out a professional role in conception by means of IVF, is argued to allow control of conception to be passed out of the hands and bodies of individual women into the hands of others upon their bodies (i.e. men), a shift marking a transition from subject to (medical) object (Rowland 1987).

It is, for the most part, only liberal feminist positions which support the use of assisted reproductive technologies (eg. Stanworth 1987b). Its supporters find these technologies compatible with a philosophy of women being empowered by virtue of having the opportunity to make individual choices. This opportunity is taken as a source of agency, regardless of whether technological and medical intervention are necessary for the choice to be realized. Stanworth argues that:

> ... the attempt to reclaim motherhood as a female accomplishment should not mean giving the natural priority over the technological - that pregnancy is natural and good, technology unnatural and bad.
>
> (Stanworth 1987b:34)

However, it is not the simplistic view of 'technology' as 'unnatural' or 'natural', to use these dichotomous modernist tropes, that forms the central source of concern for essentialist feminists. It is, rather, the foreseen (and partially realized) ramifications of the very medicalization of conception, pregnancy and birth through the practice and technologies of IVF (i.e. the technology within its lived socio-political context). IVF does involve extensive preliminary tests, hormonal treatment, multiple ultrasounds, and perhaps several bouts of surgery, from laparoscopy to 'fetal reduction' to cesarean section[16], all of which displace control from the woman herself to the medical practitioner and the technologies, for whom - at least during surgery - she is the object, not the subject, under consideration (Richard Fox 1992).

As was discussed in Chapter Two for AI and earlier in this chapter for IVF, the medicalization of conception allows for the moral regulation of those who would use assisted reproductive techniques (infertile women/couples) according to the values of those who can provide the services (physicians, clinics). As such, IVF practices not only medicalize conception, but in doing so allow for medical practitioners to determine 'who counts' as a legitimate client.

It is not surprising that an outcry has come from essentialist feminist circles in response to such practices. By virtue of a process of medicalization, members of the medical profession are in a position to be appealed to by women who need their sanctioning as being 'mother material' if they are to try IVF. From an essentialist position, this is a confiscation and subversion of a major feminine power source, in which a male dominated profession has the power to selectively deny and grant potential motherhood (although from a medical position it is seen as 'acting ethically' and responsibly). Rowland writes that:

> Increased technological intervention into the processes by which women conceive is increasing the male-dominated medical profession's control of women by men.
>
> (1987: 524)

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[16] Almost all IVF babies are delivered through cesarean section. In some cases this is because the delivery is very premature or the fetus is exhibiting signs of distress. However it has become a routine practice and - like fetal reduction - a normalized component of having an IVF pregnancy (Hubbard 1990:205).

Hubbard does not agree that the physical apparatus of the technique is inherently entangled with, and so supportive of, such social selection practices. She does, however, recognize the culturally normative role which it now plays. This is apparent in her comment that:

> Regardless of whether one agrees with the societal interests which such practices uphold, these interests have no intrinsic relevance for the technical content of the procedures themselves.
>
> (Hubbard 1990:205)

Hubbard fails to acknowledge that it is only because of these 'societal interests' - which argue that women have the 'right' to mother and children to be born to a nuclear family (see chapter two) - that the technical procedure itself exists or is practiced at all. The very nature of the physical technology of IVF means that it plays a role in supporting or subverting relations of power within society. It is clearly a mystification to assert that there can be a 'technical content' without the societal interests which create, inform, and give social shape to it. This power dynamic, inherent to medicalization and expert-accessed technology, has relevancy not only in understanding how IVF is applied, but also in how IVF is approached.

To show how these various feminist positionalities come into play, I will turn now from the generalized theoretical discussion above to the consideration of more specific cases, ones which illustrate the social dynamics buried in the politics of 'choice'.

Choice and Coercion

Within a liberal feminist framework, with its emphasis upon personal agency and American individualism, it would be argued that a woman enters an IVF or AI program by choice. It is an act of agency. She is choosing to participate in this medical domain and undergo the risks inherent in the procedure. The role of feminist action would not be to prevent the possibility of such an act, but rather to show support and respect for that woman's personal choice by demanding that such programs are made safe and accessible and that women are fully informed of any risk or potential side-effect, as well as the likelihood of success. This philosophy informed much of second wave feminism, in its arguments for the legalization and regulation of abortion.

That this analysis is appropriate for assisted reproductive practices is questioned by other branches of feminism. A central question asked is: Do women who are part of a couple who are medically defined as 'infertile' really have a 'choice' whether to make use of these technologies (if they are of the socio-economic class for whom access is sanctioned and possible)?

Those taking what I am referencing as a constructivist feminist position argue that the choice is a partial or qualified one, given the socio-political context in which it takes place. Hubbard expresses concern regarding the possibility for social coercion. She warns that "New choices all too readily become obligations to make the 'right' choice by 'choosing' the socially approved alternative" (1990: 156). This position is informed by cases, outside of the specific context of assisted reproductive techniques, where choice has indeed slid into coercion.

In both British Columbia and Ontario, as well as in 15 American states, women have in recent years faced court orders to undergo either forced cesarean sections or else surgery upon the fetus in their wombs, in circumstances where they had already chosen **not** to undergo these medical interventions into their pregnancies and upon their bodies (Radke 1992a: 65-68; CRIAW 1989:5). Clearly, had these women made the right 'choice' in the first place - to 'agree' to the proposed cesarean section or fetal surgery - then their physicians would not have taken them to court to force them to undergo the procedures, and the surgery would have been understood as the woman's 'choice'. In such situations, the meaning of 'choice' is reduced to little more than consenting to a pre-ordained fate over which there is an illusion of control. It is coercion by other means. CRIAW notes that:

> These court injunctions have made pregnant women the only competent adults in either country who have been legally forced to undergo surgery against their will[17].
>
> (CRIAW 1989:5)

Pregnant women are the only human beings in the Euro-American legal system who have not been allowed to refuse extraordinary treatment on behalf of the lives of others - in these cases the lives of the fetuses in their bodies. The primary female role is seen here as womb, not as individual. Outside of this context, no one has ever been legally forced to donate organs or blood, even in cases where through a bodily donation they are the only one who could save the life of a needful individual. This means that a mother could refuse to have one of her kidneys transplanted into her child's body, even at the cost of that child's death. While the child is not yet born, however, and the woman is in a pregnant - that is, a medicalized state (Kaufert and O'Neil 1993) - a woman is not necessarily granted the right to her bodily integrity.

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[17] I feel a need to add here that 30 American states have forced surgery upon competent adults in the past, notably sterilizing people from the early 1900's to 1942 for their criminal activity (eg. if they were convicted for rape), for being judged chronic alcoholics, or for being a derelict (Blank 1990:125). There were also bills proposed in 10 states in the 1980s to forcibly sterilize welfare recipients who were judged "unable to control their fertility", and 20 states still allow forced sterilization of retarded individuals (128). Clearly, the meaning of 'competency' can be and is shifted according to specific times, places, and political agendas.

Thus 28 year old American Angela Carter's physicians obtained a court order allowing them to perform a forced cesarean section upon her body to deliver her 26 week old fetus, on the basis that Carter was not expected to live until the time of delivery due to her advanced cancer. Although her family successfully sued for malpractice and civil rights violation, it was long after the deaths of both Angela and the fetus. Angela had died 2 days following the surgery, her death later declared to have been precipitated by the surgery. Her fetus survived for only 2 hours after being removed from Angela's body (Raymond 1993: 46).

The sheer existence of a technology allows for arguments for its use even when it goes against the wishes of all parties concerned - that is, excepting the physicians or medical researchers involved who are empowered with the legal force of appealing to hospital judges. This appears to have been the case with several episodes of postmortem ventilation (PMV) where pregnant women have been kept on life support for several months following brain-death, sometimes against the wishes of family members, so as to gestate a fetus (Hartouni 1991). This can be taken as an example of women being regarded by certain medical physicians/researchers not as individuals with spiritual beliefs and expectations which PMV could violate, or as individuals with families who need or deserve the closure provided by a funeral and burial, but rather as vessels which serve to gestate babies. The success of this method (PMV) has lead to Dr. Paul Gerber, a reader in medico-legal studies at the University of Queensland, proposing that brain-dead women be kept on life support to be used as surrogate mothers (Raymond 1993:48-49; Kirejcyk 1993:516). The technology in such cases enables and provides a justification for the explicit making of women into wombs, of agents into objects.

Alternately, the medicalizing power implemented through/by a technology may allow for the routinization or expansion of its utilization. As noted earlier, IVF is now routinely used in cases for which it was not developed and in which alternative treatments are available. The application of ultrasound shifted from being specifically offered to women (whose full consent was necessary) only under particular circumstances which were felt to warrant it, to that of a normative or routine procedure. Ultrasound was originally introduced into medicine to monitor the development of fetuses where undesirable genetic characteristics or aberrant anatomical development (i.e. of the skeleton, nervous system, kidneys, etc.) were suspected due to a variety of specific causes (usually hereditary, environmental), or to determine the biological sex of the fetus (Alberta Advisory Council on Women's Issues 1989: 20; Hubbard 1990: 153).

Ultrasound involves the projection of high frequency sound waves through a woman's womb. This produces sonograms of the woman's body (including the fetus) which are reproduced as visual images. Health and Welfare Canada has recommended that it only be used when specific medical indications require it, due to its being linked with childhood dyslexia, chromosomal modifications, congenital neuromuscular abnormalities, weakened immune systems and diminished fetal weight (CRIAW 1989:4).

However, ultrasound is performed routinely upon pregnant women. Regardless of its associated side-effects, it has become the first method of prenatal diagnosis where informed consent is not necessary (CRIAW 1989:4). It is not the case that women cannot refuse it, but that their permission does not need to be gained, nor do they need to be consulted. This routinization is often justified not on the diagnostic basis which was used to validate the introduction of the procedure, but on the grounds that physicians believe it assists pregnant women in forming a maternal 'bond'.

This use - to technologically induce the stimulation of a woman's 'maternal nature' - can be traced to medical researchers Fletcher and Evens. They argued that the way physicians ought to respond to women who are ambivalent about continuing their pregnancies is to produce in them a shock of recognition through a sonographic image of their fetus, that it is a person (Fletcher and Evens 1983:392). Their work inspired the American National Right-to-Life Committee to produce the anti-abortion/pro-life film, "The Silent Scream" (Hartouni 1994:77).

Regarding this practice, Strathern writes that:

> In the last decade, obstetrics has taken on a new and explicit responsibility, to bond mother and child. It came with the realization that obstetrics had at their technical disposal a means to institutionalize this natural emotional bond...
>
> (Strathern 1992a:48)

Strathern observes that with the technology came the means by which physicians could stake a biomedical claim upon, or medicalize, mother-child bonding.

It is worth noting that the physician interprets the sonogram for the pregnant woman - mediating and directing how what she is seeing maps to a fully formed and autonomous human body. Duden, in her argument that the 20th century Western fetus is a recently engineered concept[18], writes that with ultrasound physicians take "a diagnostic image - a scientific, technological fact - and transform it into 'evidence' that any layperson is expected to accept as sufficient to indicate the presence of a supposedly meaningful abstraction" (1993: 33). Such is the persuasive power of biomedical technology and medicalization that this does indeed take place.

Pregnant women who have undergone ultrasound agree that seeing the fetal image made them feel that the fetus was a separate life from their own: a person, as proven by seeing its head, arms and legs. In cases where the pregnant woman was considering abortion but uncertain, seeing the sonographic image often did make her decide that she could not abort the fetus-person and that she instead she had a moral obligation to carry it to term (Strathern 1992a: 48-50).

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[18] Duden's work is more thoroughly described in Chapter Four.

Although it is clear that having an ultrasound can shift the nature of the pregnancy for the pregnant woman, it is not at all clear that these shifts are necessary or appropriate, especially given the excess trauma the woman could feel if she miscarried a fetus which she had come to recognize as a full person. As well, it seems extremely patronizing that a physician would try to assert such an influence over a pregnant woman's decision regarding an abortion. The nature of the biomedical justification corresponds with others described by anthropologists and sociologists who have studied the medicalization of formally unmedicalized processes, such as pregnancy (Rapp 1993), menopause (Lock 1982), and alcoholism (Foucault 1973a).

Ultrasound is an example of a created and unnecessary medicalization. It is a routine procedure performed upon women without their informed consent, and despite the associated potential for damaging the developing fetus. Although there is no record to date of a woman having been legally forced to undergo IVF, and physicians performing the procedure insist upon the signing of consent forms, Raymond argues that there is a great deal of societal pressure to feel that the only 'right' choice if diagnosed 'infertile' is to pursue medical treatment:

> In the background of the discussion on new reproductive technologies is the credo, usually unprofessed, that a real woman is a mother, or at least acts like one.
>
> (Raymond 1993: 29)

The question of the meaning of 'choice' is intrinsically entangled with what it would mean to not make that choice. The situations I have inscribed above involve women having 'false' choices, where either they are not informed either as to the consequences of the procedure or that they can refuse it, or else situations where choosing to refuse is not acceptable to the medical professional, and leads to coercive measures being taken. Making a choice regarding whether or not to pursue IVF treatment engages the societal expectation that women should want to be mothers - and that it is appropriate or 'normal' that women should experience a sense of desperation or failure if they are told that they cannot be mothers (Harowski 1990: 139).

This issue of 'choice' and IVF has been questioned the most aggressively within the framework of what I group as constructivist feminist positions. Such positions are informed by a perspective of male-female difference being the culturally constituted product of social interaction and/or social structure (cf. Epstein 1988). Within this framework, assisted reproductive technologies are argued as serving to reinforce the (oppressive stereotype) of women's primary value as being in the role of mothering, to the exclusion of being socially valued in other possible (less 'feminine') roles.

The 'desire' and willingness to have a child through a series of invasive surgical procedures, especially in cases of male infertility, is problematized through arguments that the woman is internalizing the valuation that real women are mothers, and thus participating in her own oppression and objectification. Her actions are seen to have the further danger of reinforcing the social legitimacy of the formula: woman = mother, a trope which has historically been an important justification for limiting women's opportunities in industrial societies[19]. In each case, the woman is acting in ways which are positioned as subverting the social position of women as a group (Strickler 1992: 120).

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[19] Although gender divisions existed prior to the eighteenth century, the content and boundaries of these divisions did not necessarily correspond with nor were they

Statements to the effect that IVF is a matter of 'personal choice' are decried by feminists working within this particular critical framework of constructivism. Raymond (1993), for example, holds the perspective that procedures such as IVF are a form of institutionalized and socially sanctioned medical violence against women, which reduces their social role to little more than walking wombs. It is easy to trace a history in America of the rhetoric of 'the personal choice of women' being utilized by corporate interests to argue for the marketing of medical products or treatments which have proven to be extremely harmful to women's health and well-being.

In 1978 the manufacturer of Depo-Provera opposed the FDA playing a role in the regulation of contraceptives (theirs in particular), on the ground that such regulations which require the passing of safety tests deprived women of their right to make personal choices with regard to which form of birth control they wanted to use. In 1990, the lawyer for Bill Stern in the Baby M case argued that if the court did not uphold the surrogacy contract as legitimate, that it would be depriving women of their right to choose to become surrogate mothers. In 1992, when Dow-Corning's silicon breast implant disaster became public, the company defended itself by stating that women had made the choice to have the implants and thus their personal choices had driven the market. Dow-

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determined by biology (Shilling 1994:43). Shilling writes that "[d]uring the eighteenth century, science began to flesh out the categories of `male' and `female' and base them upon biological differences" (1994:44). The Enlightenment period is marked with the reorganization of production and the subsequent domination of women by men in most spheres of life. Given the focus upon the life sciences which dominated the epistemology of the time, it is hardly surprising that the source of gender relations shifted to being located in the body. Shilling argues that: "In short, a naturalistic reinterpretation of women's bodies was made to solve some of the ideological problems involved in justifying inequality in eighteenth and nineteenth century gender relations" (1994:44). See also Lacquer (1990).

Corning attempted to divorce itself from having any responsibility in the creating and supporting of that choice, as well as its outcome. They further argued that regardless of the risks which had become public, that it would be an injustice to women to crush their right to have silicon implants (Raymond 1993: 85). In these cases, the corporations deployed a bastardized liberal feminist argument to counter potential constructivist and essentialist objections.

The duplicitousness and self-serving nature of such claims in these cases - that one's interest is in upholding 'women's right to choose' - is made explicit by considering in more detail the example of Dow-Corning breast implants, where the line between the commercial and experimental, and the therapeutic had more than been crossed. In the 1970s, 350,000 women had breast reconstructive surgery following mastectomies, and more than 1,000,000 women 'chose' to have their breasts enlarged. During the 1970s there were serious problems reported with their use, including silicon leaking, silicone moving, auto-immune disorders, and loss of nerve sensation in the breast. Dow-Corning continued to assert that the implants were essentially safe and that as it was up to women to choose whether to make use of the technology, those women were choosing to take the risk. This choice to have breasts enlarged, explained the American Society of Plastic and Reconstructive Surgeons in a 1982 interview, is understandable because small breasts are not only "**deformities**", but "**a disease** which in most patients results in feelings of inadequacy" (Barringer 1992: C12, emphasis added). Physicians thus naturalized such a 'choice'; by pathologizing women's breasts as diseased they medicalized and legitimated a social (de)valuation **as legitimately caused by** a woman's bodily 'deformity', which had as its psychological symptoms or side-effects low self-esteem.

The rhetoric which positioned the decision to make use of silicon implants as being placed in the domain of individual women's personal responsibility, effectively positioned Dow-Corning as neutral middle-men who did nothing more than make available a certain service for those who chose to use it. It simultaneously any role in building and sustaining the social values which can be seen to contribute to these women's reported 'low self-esteem'. Any accusation of ethical impropriety would therefore be misdirected if it implicated them, given their claim that they were only answering a market demand. In 1992 silicon implants were banned by the FDA, upon their recovery of internal company documents from 1975. These documents indicated, among other unreported risks and failed experiments, that safety studies Dow-Corning had published had falsified results through claims that test animals had remained in good health following test silicon implantations where, in actuality, they had died (McNichol 1992: A3).

What meaning is there in such 'choices' and 'rights'? It is true that no one physically forced individual women to purchase the implants and undergo the procedure. However, Raymond's analysis and generalizations denies women (other than herself and those who hold similar feminist positions) the possibility that they are agents, cognizant of the framework in which they are acting.

The context in which such 'choices' take place is extremely complex, involving a socio-political framework which not only incorporates the research and financial interests as well as authority hierarchy of the medical profession but also issues of gender power dynamics and social expectation. The 'choice' to use poorly tested contraceptives, become a surrogate mother, or have enlarged toxic breasts are hardly 'rights' for which women have been fighting.

This corporate utilization of liberal discourse mobilizes the ideological weaponry associated with the strong rhetoric of choice and women's rights to demand social sanction and create the image of being active supporters of women's liberation. In doing so, they actively minimize the meaningfulness of the political and social context in which individual women are acting and demean those things for which women have fought to have the power to choose (eg. abortions).

Although I have presented an argument which calls for the recognition that women do not often create the social conditions in which they act, this is not to abrogate women's capacity to act, choose, or be aware of the situated larger context. Although there are cases of corporate manipulation of the rhetoric of choice which prey upon women, it is unwarranted to assume that these cases parallel all others or that women are helpless victims of such rhetoric. Nor is it to argue that physicians are de facto complicit in supporting corporate agendas. Rather, it is to point to a more complicated assessment of what one can call women's choices in such situations.

Motherhood and the Meaning of Choice - On the Politics of Pregnancy

Given the above discussions, is there such a thing as informed consent or true choice where IVF is concerned, or is 'choice' simply being deployed as an ideological tool to mask coercive social practices? Testimonies given by women undergoing IVF about their decision to use the procedure convey unambiguous positions on the matter. There are two main narratives used to explain their decisions, sometimes simultaneously. One is that the decision to try IVF was based upon a social need - quite simply that "it [having children] is just something which I expected to do" without which one would be missing something in life, or that "Becoming a parent is usually synonymous with growing up and acting responsibly" (Royal Commission 1993: 170 and 171). Thus the choice to use IVF is positioned by some as a way to try to recover the life pattern which they desired or expected, upon finding themselves diagnosed as infertile and believing that life pattern was now threatened.

Many women express in very strong terms the sense of desperation they felt to try IVF upon being diagnosed as 'infertile'. They also describe feminist critiques of IVF, as outlined above in the approximated positions of constructivists and essentialists, as both insulting and patronizing of their personal experiences and sense of agency (Strickler 1992:116-117). Anthropologists McNeil and Franklin (1993:480) acknowledge this antagonistic trend in framing their approach to assisted reproduction as one which is "mindful of the dismissal of feminists as the mean, bitter step-sisters who ignore their sisters' heart-felt wishes and desires". One must ask if a feminist analysis is culturally legitimate (i.e. is true as a cultural generalization) or valuable if it alienates, is experienced as belittling, and is actively denied by the women who are living through the situation which is allegedly represented. The Royal Commission supports this liberal feminist interpretation, reporting that:

> Contrary to what some observers have said about external pressure, our survey of 1395 women who have participated in infertility programs across the country showed that women's own desire for children was the strongest motive for seeking help at a fertility clinic.
>
> (Royal Commission 1993: 381)

Unfortunately, the Commission offers no deeper analysis of what constituted this desire - which is the central issue interrogated by holders of constructivist feminist positions in their critique of IVF. This finding would perhaps be more useful had the Commission also asked how these women would understand themselves or expect to be understood if they had decided to not apply for treatment[20].

Harowski, a health care worker, describes in equally uncritical terms that:

> For most women, motherhood is a cultural or social role that is still an expectation rather than an option. Any interference in obtaining the desired outcome of being a mother will likely affect self-esteem, body image, and sense of femininity.
>
> (Harowski 1990: 139)

Harowski's description echoes somewhat the medicalized and thus legitimating description by plastic surgeons of women's desire/need for breast enlargement as logically based upon such 'deformities' as leading to low self-esteem, etc., as reported above.

The second position offered by IVF users and supporters is that the desire for a child 'of ones own' is a biologically rooted need. It is positioned as acultural and thus outside of any social context. A politicizing of the desire - by discussing it as a social phenomena involving power relations - is therefore a misconstruing (or perhaps appropriation) of what they see as a 'real' (biological) issue. Infertility is positioned in the domain of physiological disease, with all of its trappings of positivism, causality, and objectivity. As such, it is inhumane or unconscionable to leave it untreated if the knowledge or technology exists to 'fix' the problem[21]. One woman who underwent IVF stated to a journalist that "Infertility is an illness, like any other illness. If you have a cold, you treat it" (Carvalko 1994).

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[20] There have been many criticisms raised against the Royal Commission Report for its research methods and reported findings, both by the four of the original seven commissioners who were fired, as well as by groups who filed reports and claim to have been subsequently misrepresented or miscited. See Basen et al. (1993) for a compilation of essays on the topic.

[21] One can see how holding such a perspective would similarly justify forced cesarean sections, fetal surgery, and the post mortum gestation of fetuses.

This position is actively supported by the staff at IVF clinics. Dr. Margo Fluker, of the University of British Colombia's *In vitro* Fertilization Program, stated in an interview that: "The **instinct** and **desire** to have a child is not something you can explain or rationalize" (Lavoie 1994b, emphasis added). Patrick Steptoe, one of the scientists who 'fathered' Lousie Brown, the first IVF baby, asserted that "It is a fact that there is a biological drive to reproduce. Women who deny this drive, or in whom it is frustrated, show disturbances in other ways" (from a lecture cited in Stanworth 1987a: 15). Steptoe not only biologizes the desire to reproduce, but **pathologizes** those women who would not seek medical treatment, making **not** choosing IVF a disease. Edwards and Brody are proud to proclaim in their medical textbook on assisted reproductive technology that:

> The practice of IVF is now an accepted medical treatment for the alleviation of human disease, i.e., infertility, and not an experimental technique.
>
> (Edwards and Brody 1995:45)

In one brief statement, Edwards and Brody claim a great deal of territory as rightfully belonging to biomedical practitioners. IVF is declared to have left behind its status of being experimental, having become a full-blown treatment, and that infertility is a human disease which has needed alleviation. Of course, such statements are appropriate given the definition of infertility as a biological, not social, issue:

> Infertility having been constructed as a biological problem, there is no alternative to a biological resolution.
>
> (Franklin 1990: 209)

The Canadian Research Institute for the Advancement of Women (CRIAW) argues that IVF clinics promote the understanding of infertility as a disease, so that people will see themselves as in **need** of medical treatment (1989:5). But is this a manufactured need, with manufactured consent? As Susan Sontag argued in her ethnographic study of metaphors of illness: "The concept of disease is never innocent" (1979:81).

Janice Raymond takes Sontag's assertion as a starting point for her text on assisted reproductive technology, dedicating her first chapter to an analysis of the cultural production of fertility and infertility (1993: 1-28). Raymond is adamant that:

> Infertility is not a deficiency disease. As traumatic as the absence of children may be for some people, infertility is no more a disease than is the absence of other physical capabilities. Disease rights activists have long pointed out that physical handicaps should not be treated as diseases.
>
> (Raymond 1993: 2)

Raymond is arguing that the medicalization of infertility is an inappropriate act, as it wrongly positions it within the loaded framework of disease. Such a position stands in direct contradiction to those held by many individuals suffering from infertility, whose ability to access treatment may depend upon a health insurance plan which acknowledges it as a medical problem. The medicalization of a formally social issue is not always a case of health care practitioners simply 'seizing power'. One of Zola's conclusions in his study of medicine as an institution of social control is that "this medicalization of society is as much a result of medicine's potential as it is of society's wish for medicine to use that potential" (1994: 400). That it is a dialectic process in which lay people are often willing participants has been argued by several social scientists (cf. Shorter 1993 and 1994 on psychosomatic symptoms; Gordon 1988).

Riessman (1993), for example, chastises feminist analyses of medicalization for not acknowledging the active participation of specifically middle and upper-class women (as patients) in the construction of new medical definitions. She argues that feminist analyses of medicalization often neglect to consider that women have chosen to actively participate in it, or that women have in fact benefited from it. She maintains that certain socio-economic groups of women have played significant roles in the reaching of a consensus that a particular human condition or experience is to be understood in clinical terms. For example, Riessman considers how upper class Victorian women actively petitioned for the use of anesthesia during childbirth, as "if freed from painful and exhausting labour [from which such women often took a year to recover], women could (the reformers felt) more fully participate in democratic society" (1993: 129). These women had an explicitly political agenda which they expected to be better able to fulfill through the medical recognition of certain aspects of their birthing experiences as undesirable and medically treatable.

Reissman further argues that such consensuses are always tenuous as their impacts are typically contradictory in nature, with women simultaneously gaining and loosing something with each medicalization (1993:123). In childbirth, for example, Victorian women wanted to control what kind of labour and delivery they would have so that they would be less incapacitated by (and less likely to die from) the birth process - but to attain this control through the use of anesthesia required complete dependence upon the physician as well as a need for the clinical setting (Reissman 1993: 129-30). Hubbard also concedes - following her description of the horrors induced through the medicalization of childbirth (e.g. 'childbed fever', twilight labour[22], forceps, thalidomide, D.E.S.) - that:

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[22] Childbed fever, or puerperal fever, took an enormous toll on women's lives and health from the late 18th C. until the 1930s discovery of antibiotics. It is argued that it was largely spread by physicians who were not washing before assisting at births. Twilight labour, a practice of the 1940s and 1950s, involved giving the woman in labour barbiturates and scopolamine. This led to babies being born drugged and in need of resuscitation (Hubbard 1990:149-151).

> It would be a mistake to believe that all, or perhaps even most, women were unwilling victims of these medical interventions. Many women welcomed the relief offered by drugs, much as they welcomed contraception and baby bottles as respites from the stresses of motherhood.
>
> (Hubbard 1990: 151)

This is not to downplay the role of medical researchers and physicians in medicalization, who clearly have both ideological and material motivations. In the case of childbirth as described above, Reissman argues that obstetricians believed both that childbirth would be safer for women if it was medically attended and orchestrated, and that there was a new client/service market to be made through the social acceptance of physician attended births (1993:129).

While Reissman and Hubbard consider the role of women as active - yet somehow unwitting or naive - participants in the medicalization of their bodies and bodily processes, Martin (1995) takes a more sophisticated position which explicitly acknowledges larger political processes. She states that the medicalization model which she had used in earlier work, and now rejects, was essentially a trickle-down model, "of privileged scientific knowledge flowing down from the top, ... and resisted strongly, weakly, or not at all, by those at the bottom" (1995: 257). Following her intensive research on social and medical networks focusing on HIV infection, however, she was stunned by the complexity, power, and number of players who may choose to be involved in the medicalization process:

> I was faced with groups who ... would exert any amount of effort to change the course of [AIDS-related] policies adopted by city hall and the state, while at the same time collaborating eagerly with the research agendas set by the medical establishment. **Such complex and**

> **conflicted relationships are not captured well by a simple division between two sides, one good, one bad.**
>
> (1995:257, emphasis added)

Molecular biologist Erwin Chargaff takes a stand which is nearly opposite to that of Martin, and far less generous than those of Hubbard and Reissman. He provides his analysis of the motivations of medical researchers in working with assisted conception technologies in an article he published in Nature. Here he argues that: "The demand [for assisted reproductive technologies] was less overwhelming than the desire on the part of scientists to test their newly developed techniques. The experimental babies were more of a byproduct" (Chargaff 1987:199-200). Given current practice, with both its abysmally low birth rate and the misleading success statistics which indicate chemical pregnancies instead of live births, there is some grounds for such a position.

Chargaff, while supplying an account of the desire of physicians and researchers to use/test such procedures, does not speak to the public acceptance and **demand** for assisted reproduction - that is, the complexities of the dialectic, with its multiple discursive elements, are left unaddressed. Anthropologist Sarah Franklin performs a more refined analysis in "The Social Construction of Infertility" (1990). She draws the data for her discursive and narrative analysis from an examination of popular representations of infertility and its treatment. These are chosen as they form an important source of information for the public, from which they would impart understandings and positions.

Franklin finds that the trope of infertile couples as desperately in need of having a child at any cost is presented through the two approaches described above - one central discursive practice is to present the social needs of the couple 'to confirm themselves as a normal nuclear family' who can live the life they expected to have; the other is to invoke the terms of 'disease' and 'biological drives'. Franklin notes that these are both complimentary and contradictory. Twinned together, these two sources of 'desperation' create a strong case for supporting the development of assisted reproductive technology and supporting those who request it.

Where contradictions and complications arise, however, is when individuals wanting access are those who represent values which those in positions of authority do not share. As described above, one must apply and be accepted for IVF treatment by a physician or clinic, whose terms of selection are largely self-generated and self-regulated. Being accepted is a matter of fitting a stereotype of a 'good mother' - middle class, married, etc.. In cases where the applicant does not meet the social selection criteria, the biological argument - which, as cited above, appears to be the main position held by IVF clinics - is selectively denied. For example, Patrick Steptoe, who developed IVF:

> ... simultaneously believed that all women have a biological drive to reproduce, and that it is immoral for lesbians or single women to have children. Thus, for socially acceptable women, biology should be destiny, whereas for socially unacceptable women, the demands of biology should be restricted by social sanctions.
>
> (Franklin 1990:208)

This shifting use of social and biological explanations of reproductive drives reveals how contradictory explanations can be adapted to the dictates of particular moral and political beliefs. This mirrors the argument put forward in the second chapter that practices are deployed in such a way as to secure the production of the nuclear family, regardless of whether the strategies as a group are inherently contradictory.

Franklin concludes that it is the repetitive and reinforcing nature of the narrative mechanisms deployed in public accounts - appealing either to biologically or socially induced need or both - which are a major means by which techniques such as IVF became publicly recognized as 'obvious' or even 'normal' means to cure infertility. Kimbrell similarly attributes much of the public demand and willingness to participate to media 'hype' which has lead to couples having unrealistically high expectations of fertility treatment (1993:71). And this occurs despite the fact that the technique is seldom successful, quite expensive, raises substantial moral issues, and does nothing to alleviate infertility itself.

Such a normalization and public acceptance stands in direct contradiction with the recommendations published by parties with less vested interests. The World Health Organization (WHO) performed a data gathering project on *in vitro* fertilization. Their subsequent report defines IVF as an experimental procedure, not a medical practice. The reasoning given is that no new technology should become an accepted medical practice until it has undergone a thorough and careful scientific evaluation, which they found absent in the case of IVF (WHO 1990:1-7).

Cultural Contradictions and Contestations in IVF Discourse

Recent Euro-American history provides many examples of reproductive therapy or medical procedures aimed at improving women's lives which turned out to be disasters for those who partook of the drug or treatment - thalidomide, diethylstilbestrol (DES), the Dalcon Shield IUD, and silicon breast implants are but a few to which IVF with its laparoscopy and superovulation drugs may join the list.

Although an analysis of power at a societal level may indicate that there is strong ground for some of the feminist positions described above, applying such an analysis to individual women considering or undergoing IVF simply does not honour their experience nor grant them their agency. Instead, such discursive practices serve to sacrifice the meaningfulness of their experiences by placing them in the category of 'not counting', just as physicians have done by limiting the access of single or lesbian women and mixed 'race' couples to forms of assisted reproduction. Although several authors (e.g. Hubbard 1990: 162) state explicitly that they do not wish to deny the real pain which women who seem unable to conceive may suffer, such disclaimers do not noticeably shape or seem to be accommodated into their final positions.

From all of this, it is clear that the meanings of women's desires to parent are extremely contested: meanings attributed range from biological urge to symptoms of 'the patriarchy'. It also appears from the texts I have reviewed that those people writing on the topic from an academic feminist perspective consider their theoretical framework to encompass the lives and experiences of all women in at least Euro-American society, if not the world, as though there were a complete cultural homogeneity in women's experiences. Issues of ethnicity are only raised with regards to practices of discriminatory access, not in terms of the different culturally-based meanings which may exist in Euro-American populations with regards to assisted reproduction[23].

Clearly 'parenting', even in the limited manner it is considered above, is a polyvalent term, which simultaneously supports multiple and contradictory meanings. This bleeds over into any discourse of IVF, where the grounds exist to justify a series of different positions, based largely on the figuring and refiguring of women as subjects or objects, agents or wombs. The meaning of IVF is further confused by its technological apparatus and its status as a medicalized procedure accessible only through and with medical authorization. It also appears that 'choice' is only ever partial, due to the different socio-cultural readings and valuations placed upon practicing different options - to the point that no option may in practice exist for some. In cases where the social-political context are over-written or obscured (i.e. by corporate interests) the term 'choice' has little true meaning.

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[23] There is, however, a body of culturally sensitive research and literature on birth, pregnancy, and pre-natal testing (e.g. Duden 1993; Rapp 1993; Martin 1987).

All of the feminist based positions discussed above regarding social valuations and devaluations, biological empowerment and disempowerment, offer no real clues as to **how** these dynamics actually operate or have come to operate on the level of culture and consciousness, hegemony and ideology. They simply claim that the dynamics exist. A major difficulty for those looking to understand the 'whys' and 'hows' of IVF is that the critiques offered are contradictory ones, though they are ostensibly offered in the best interest of women and out of their lived experience.

It is beyond the scope of this paper - and perhaps inappropriate - to attempt to resolve these contradictions, especially given the selective and generalized manner in which feminist positionalities have been utilized here. It is more significant to acknowledge these contradictions as indicative of the inadequacies in trying to explain or understand a cultural phenomena or series of cultural phenomenon through the perspective offered by just one voice or positionality, which would be to reduce the fabric of the story to a single thread. The meaning of IVF is not a simple dialectic of male-domination versus female-resistance or submission (to which both essentialist and constructivist positions often are reduced), although it is significant that some do take this perspective. Nor is it adequately reducible to strictly either a biological or a social issue. While such perspectives are part of how some feminist critics of IVF understand their world, it is also part of the larger dialogue in which IVF is culturally situated.

Still, there may be avenues available from anthropology to help describe how the contradictions may arise and may come to be (tentatively) resolved. The multiple contestations and continua of meanings which come to be applied to a single word such as 'choice', 'motherhood', 'parenting', and 'need', point to the play of consciousness and representation, hegemony and ideology. As Comaroff and Comaroff (1991: 39) discuss in their research on colonialism and consciousness, for any contested sign there is "no single determination, no bottom line upon which to place a ... narrative". At the same time, they ask the question of how it is, if all meaning is potentially open to contest and so all power potentially unfixed, that in history we see long lasting hegemonies which appear able to impose a degree of order and stability. They also ask how it is that minorities are able to gain and maintain control and draw large populations into a consensus with their dominant values and simultaneously those from majority populaces may resist this control (1991: 17).

Part of the lesson which I am able to draw from the culturally situated and historically bound research into these questions by Comaroff and Comaroff is that it is more easily done in the 'past tense' - when much of the discursive dust has settled to the point where one can identity, for example, the hegemonic or ideological outcome or origins of a certain thread of dissent - as well as which tensions of the past continue through to the present and in what buried or explicit form. The multiple and contradictory discourses of IVF, however, are still unfolding and exploding. They appear, to a large extent, to be the current medium of an on-going struggle between the holders of certain competing ideologies, all of whom desire to conventionalize their positions through creating resistance to others and/or by co-opting a naturalizing (or naturalized) rhetoric. The medium of this thread of the debate is hardly meta-theoretical, however, but rather the state and experience of individual people's lives. To simply chalk the matter up to a radical relativism that somehow simultaneously accepts as 'equal' all of the positions would be disrespectful of the veracity of the lived experiences of those people facing choices over IVF, and thus an irresponsible act on my part. Therefore, I will touch upon some of these issues again in my conclusion, where I re-consider them within the theoretical contextualization utilized and explored in the next chapter.

The next chapter considers at length the continuing attempts to formulate a culturally meaningful understanding of a new phenomenon. Specifically, the IVF by-product of fertilized ova which are not intended for attempted implantation - what have been described as 'kinless' embryos. I will be drawing upon the writings of both policy-making bodies and anthropologists, and will frame my considerations within the conceptual spheres of hegemony and ideology, naturalization and denaturalization.

Chapter Four

The Production of Cultural Intelligibility and the Peopling of Categories

Or, the Denaturalizing of Biology

The previous chapter attempted to tease apart several different analytic positions which have addressed the social dynamics and politics of *in vitro* fertilization (IVF). In doing so I drew out the complexity of understanding the cultural and lived meanings of IVF. IVF was seen variously as i) a component of the medicalization of conception; ii) a tool to validate the social positioning and valuing of the formula 'women = mothers'; iii) a mechanism which enables reproductive coercion; iv) medical research written as treatment; v) a source of hope; vi) meeting a biological need when 'nature fails'; etc. This exposed the dynamics of IVF as a composite which does not necessarily have a single underlying or encapsulating frame of knowing. One possible exception is that IVF treatment and the differential availability of that treatment has consequences which are not just theoretically contemplated but actually lived through by individuals.

The current chapter will continue to consider issues related to IVF. It examines those aspects of the IVF debate which have generated the most interest and discussion within anthropological circles, as opposed to those taken up most vigorously within feminist debate.

The primary issue is how certain predominate cultural values or beliefs are exposed and/or questioned explicitly *by virtue of the technical practices and stages which make up the IVF procedure*, as well as the repercussions of that exposure. Discussion revolves around how anthropological analysis can help to make sense of the procedure's societal outcomes as having the effect of destabilizing certain culturally hegemonic beliefs, shifting them into a zone of ideological contestation. The IVF embryo, in particular, provides a strong focus for exampling this discussion. It emerges as a focal point of contestation as its very existence entails the re-negotiation of certain social terms and their relationship to the domain of 'nature'.

With these anthropological interests in mind, I select for discussion the following general topics, all of which have sprung from or are focalized by the IVF procedure: i) the public refiguring of notions of kinship; ii) legislative and parliamentary attempts to understand and pass judgment upon the social meaningfulness of an *in vitro* embryo; iii) instances of both the naturalization and the denaturalization of biological 'fact'; and iv) my own positioning of the IVF embryo as a potent symbol due in part to its inherent liminality. The over-arching theme of all of this discussion is that these issues are highly politicized, marking potential shifts of hegemonic beliefs into ideological ones. In working through these issues I draw significantly upon the work of Shore (1992), Strathern (1992a;1992b), Mulkay (1994), Duden (1993), Rapp (1993), Comaroff and Comaroff (1991), Franklin (1992, 1995), Douglas (1966), Kristeva (1982), and Butler (1993) .

The specific frame offered consists of two sections. The first section primarily considers specific manifestations of socio-cultural axiomatic shifting; or at least predicted manifestations. Some of these shifts relate directly to the IVF embryo, while others are drawn upon to provide roughly parallel examples. I first consider what sorts of societal change are predicted by anthropologists and sociologists as a result of the introduction of IVF, along with the grounds for these predictions. This bleeds into discussion of the difficulties encountered by several groups who have tried to assign a specific status or meaning to the IVF embryo. I argue that these difficulties spring in part from the manner in which the existence of IVF embryos simultaneously affirms and contradicts cultural understandings of reproduction and kinship. I give much consideration to the rather unsuccessful project of mapping facts of technologically enabled kinship (i.e. through IVF) onto those which are taken as biologically or *naturally* derived. These considerations are situated in the context of attempts to determine whether the IVF embryo should be understood through the domain of personhood or that of property.

For comparative purposes and to show biologization as a materializing cultural process, I draw upon Duden's descriptive analysis (1993) of the fetus as an example of a recently biologized entity. This grounds the subsequent discussion on how biological knowing constitutes a virtually hegemonic cultural practice. I demonstrate that this axiomatic status becomes very slippery during negotiations aimed at determining the legal and moral meaning for IVF embryos, that is, attempts to assign IVF embryos a culturally intelligible meaning. While some cite biology as the ultimate moral and semantic reference standard, others clearly find biology inadequate as a knowledge foundation for understanding IVF embryos, even though the embryos are its product.

The second section of the chapter considers on a more explicitly theoretical level how it is that the IVF embryo disrupts existent cultural categories, as discussed in the first section of the chapter. I suggest several anthropological frameworks through which the IVF embryo may be understood (eg. as having a liminal character), and import some frameworks from other disciplines for alternate understandings (eg. as having an abject character). I conclude the chapter by pulling together all of the threads, arguing that anthropology is a very useful practice for unraveling and so beginning to understand such complex cultural phenomena.

Part One: Positioning the Issues

IVF and Potentiality

Debates within many self-proclaimed feminist frameworks appear to have taken virtually as their premise the view that assisted reproductive technologies will not significantly alter social relations in a manner useful to their cause, but rather will serve to reify current oppressive practices or otherwise dis-empower women[1]. This position, namely that the status-quo will be maintained or perhaps even more explicitly reinforced, has surfaced in discussions taking place in strictly anthropological circles as well. There is no consensus on this point. Some anthropologists argue that the very existence of assisted reproductive technologies brings understandings of reproduction and kinship into the public arena. That is, by introducing new 'facts of life', the axiomatic matters of reproduction and kinship become contestable issues in public discourse and competing ideologies.

The scrutiny and discussion induced by such public attention is understood by some to mean that a major cultural shift in comprehensions and imaginings of kinship meanings is essentially forced. Chris Shore can be taken as a strong example of this position.

Shore (1992) published an article on assisted reproductive technologies in Current Anthropology, in which he reviews British public and parliamentary debate surrounding The Warnock Report[2] and subsequent government bills regarding assisted reproductive technology. The conceit of his article is that the debates primarily reveal contested and conflicting constructs of kinship, personhood, and family in Britain. His analysis regarding why those contestations exist is that every society has a vested interest in controlling reproduction and fertility, and has institutions which compete to monopolize the discourses through which legitimate reproduction can be conceptualized (Shore 1992: 301). This Foucaultian description of power dynamics does not, however, necessarily support the conclusions which he draws from them. Shore draws rather ostentatious and prophetic conclusions (the nature of which I have argued in the second chapter have little supporting evidence) such as:

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[1] See chapter three for an extensive discussion of feminist positionalities.

[2] A study on assisted reproduction directed towards proposals for public policy and chaired by Mary Warnock was commissioned by the British government in the early 1980s. The subsequent report, formally entitled A Question of Life: The Warnock Report on Human Fertilization and Embryology (1985), formed the basis for proposed bills and

> Whatever one's interpretation, one thing is clear: the speed with which new reproductive technologies have emerged has caught the British public off guard, and few people have yet awakened to the fact that **our most basic assumptions about parenthood, procreation, conception, and the family are about to undergo a radical transformation**.
>
> (Shore 1992: 301 emphasis added)

Shore thus argues that radical changes are inevitable with regards to understandings of what constitutes a family, as a result of the public and political discussions concerning reproductive technologies.

One can see at least three possible outcomes from the cultural contestations to which Shore refers: i) social change may be affected concurrent with hegemonic beliefs losing their absolute status; ii) social discussion may be agitated but without resolve, such that if there is any shift it is long and slow in coming; or iii) the 'new' facts may be understood in such a way that the status quo is re-stabilized and re-naturalized, that is, they are

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shaped much of the parliamentary discussion. This report is generally referred to as 'The Warnock Report'.

seamlessly 'absorbed'. Shore chooses the first outcome, but provides extremely little evidence for his position. One morsel is the observation that within the formal parliamentary debates an important concern was the relationship between social parenthood and biological parenthood, specifically how to reconcile or understand kinship relations when the biological father no longer corresponds to the social father (1992: 299-300).

Shore's analysis of what is culturally significant about these debates fails to recognize or take into explicit consideration that those participating in the debate in the British House of Lords would for the most part be men who hold their position in life and much of their fortunes solely on the basis of being able to claim themselves the legitimate male progeny of certain powerful men. Such individuals would have a strong vested interest in ensuring that what constitutes legitimacy remains something which they can control. A discussion of the possibilities made conceivable by assisted reproduction (which focuses on 'fathers' as a crucial category) - and how to stop such possibilities from being realized - certainly does not in itself indicate that 'radical changes are afoot'.

In the 'Comments' section following Chris Shore's article, one finds a diversity of positions expressed. In general, the opinion that much of the debate is over issues of kinship is seconded by many, however the commentators differ on the expected outcome of the debate, and whether in fact there will be any "radical transformation". For example, Robin Fox argues in support of Shore's position. This is epitomized by his assertion that "This great leap forward in technology leaves us unprepared for what appears to be a redefinition of the family, of marriage and 'unlawful procreation', and even of the individual" (1992:304). Fox, a sociobiologist, is arguing from the position that social categories will necessarily reflect biomaterial reality. Thus for him it can only be the case that a new biomaterial entity or reproductive possibility entails an appropriate socio-cultural response.

Schneider, however, is in complete disagreement. He argues that the British cultural categories of kinship; mother, father, daughter, son, etc., remain the same, and have not changed as a result of the introduction of assisted reproductive technologies. He further adds that these technologies are not likely to cause these categories to change. He asserts that the challenge posed by assisted reproductive technologies is not to the categories themselves, but rather ***how to assign people to the given cultural categories*** (1992: 308), that is, how to maintain the same basic social structures given the possibility of 'extra' people.

Schneider draws his argument in part from the observation that before blood groups were known, the presumption was that a woman's husband (or male lover) was the father of her child unless there was strong evidence otherwise. The discovery of blood groups did not change the definition of 'father' - it reinforced the distinction between progenitor and pater by providing a biological determination test, but that the social/biological distinction was already present (1992:308). Schneider states that the question to be considered is not "Should a mother love, nurture and protect her child", but rather which person of those who were involved in creating a child is most likely to do the best job of 'mothering' (1992:309). Schneider, unlike Fox, takes what I call a socio-deterministic position. I outline such re-stabilizing positions as the third option, above. He argues social categories to be extremely stable to the point that new biological 'facts' will necessarily be understood in such a way as to fit into existent social categories. That is, at least in this instance, he is positioning explicitly social categories and roles as having an axiomatic character.

Several anthropologists or other social scientists outside of this specific set of exchanges have taken this article as a jumping off point for situating their discussion of assisted reproductive technologies. An article which is significant for the discussion of implications of *in vitro* fertilization, and which launches itself in opposition to Shore, is Michael Mulkay's "Science and Family in the Great Embryo Debate" (1994).

Mulkay is in the same camp as Schneider, in that he believes the fundamental issue fueling the assisted reproduction debates is not dissent over what should or should not be allowed as new categories of social parenthood. Rather, Mulkay sees the central issue of socio-cultural contestation as being whether or not out-of-body embryos should be morally recognized as 'people' or simply as human tissue or cell samples, and at what developmental point a differentiation between these physiological-moral categories is appropriate[3]. As is discussed below, this is rather important for such considerations as determining whether experimentation upon embryos is ethically feasible. Mulkay's position is succinctly stated as follows:

> [T]he debate actually produced sustained reaffirmations from all parties of essentially the same traditional ideal of family life. This was possible because the debate was not primarily concerned with the changes in human relationships made feasible by the techniques of assisted reproduction. The central question of the public debate was not: How far should we redesign the family? but rather: How far should we allow research on human embryos?
>
> (Mulkay 1994: 700)

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[3] It is not of great relevance to my discussion to isolate which anthropologist is correct as to what single issue 'truly' dominated the debate. As my intention is to discern important 'themes', (and to discuss how those themes are themselves relevant or indicative of another underlying issue) such discussions are important in terms of identifying what people argue to be important issues, as well as my own observations of the data.

To take up the latter of Mulkay's two cited questions, it becomes necessary to frame what is being discussed, which is the issue of needing to determine a moral status for out-of-body embryos. As is described in chapter three, subheading "Introducing *in Vitro* Fertilization", the poor success rates of IVF have physicians prescribing superovulation drugs to women such up to 30 ova - instead of one - can be removed with each laparoscopy. The average number extracted is 7 to 12. Although as many ova as are extracted from a woman's body are introduced to a semen sample, only 3 or 4 of the ova which are fertilized will be re-introduced back into the woman's body for possible implantation per IVF attempt. It is the fate of these other embryos, those which are 'extra' and are not needed or wanted by the woman who underwent the laparoscopy (or else are traded in exchange for the IVF services), which Mulkay identifies as the source of contention.

Mulkay notes that no parliamentary consensus was reached over the issue of whether embryo research is inherently immoral, as the participants in the debate never reached agreement over the meaning of an embryo created *in vitro*. Some maintained that it was simply a dish of human cells which may or may not attain the status of personhood. Others argued the position that it is the deliberate artificial creation of a totally dependent human being. This person, by virtue of existing essentially outside a network of kinship relations (i.e. the mother, by deciding to not freeze or implant it, essentially gives away her maternal claim), had no one to defend or represent its interests except legislative bodies [i.e. from being used for genetic research or simply being destroyed] (1994: 701).

The status of the *in vitro* embryo is clearly different from that of an embryo in a woman's body, which women in most Euro-American countries can choose to abort up to a certain developmental stage. Mulkay does not refer to this differential status in his discussion. I suggest that this difference in meaning is not unexpected, as western abortion debates have typically centered on negotiating a 3-way hierarchy or network of rights: those of fetuses figured as potential human beings; those of adult women who may wish to abort the fetus; and those of men who are the progenitors of the fetuses.

In the case of an *in vitro* embryo, there is no woman in whose body the 'potential human being' is located, nor any man demanding that a specific woman either should or should not carry 'his child' to term where there already exists a developing fetus in a woman's womb. The 'extra embryo' debate is thus a comparatively and literally disembodied one which does not negotiate issues of societal versus personal control over women's bodies, even though the wider IVF debates most certainly do.

Mulkay's analysis of the legislative debate, etc. indicates to him that it was the social/biological ***meaning*** of a new phenomena - an *in vitro* embryo - which was being centrally contested. If a meaning to which all had agreed had been negotiated, then the answer to questions of what is the ethically proper way to proceed would probably have deductively followed. This returns us once again to Henrietta Moore's discussion of the politics of needs which I presented in chapter two, in particular her discussion of the power of definition of terms in guiding the form, meaning, and outcome of a debate (1994: 94-95).

Mulkay builds his argument from an examination of the Warnock Report and the ensuing parliamentary debate in the British House of Lords and House of Commons. He notes that the issue of the status of *in vitro* embryos is raised more often by members in the Houses than any other. As well, Warnock isolates the issue as making all others which the committee considered relatively trivial in comparison (cited in Mulkay 1994: 701-702). The concern, as is noted above, is not directed towards those embryos which will be placed in the uterus of the woman from whose ovum the embryos were formed. Rather, it is directed towards those embryos which the woman does not want or need, which are not intended or otherwise expected to enter the kinship system. "It was these 'kinless' embryos' which lay at the moral and emotional centre of the public debate" (Mulkay 1994: 703).

This shift into a state of conceptual 'kinlessness' is an intriguing possibility, quite revealing of the cultural constructedness of kinship understandings and its relationship to human bodies. All of the ova which are extracted and fertilized constitute potential future members of a kinship network, just as an embryo conceived 'traditionally' is a part of the kinship network through the woman's body in which it gestates - its membership is quite literally one of an ***embedded embodiment***. The crucial semantic shift occurs when the woman (and her partner) decide not to cryopreserve the 'extra' embryos for *their own use* in the future. At that point, the embryo passes from potential personhood, granted membership in and protection by the kinship network constituted by the individuals from whose gametes it was formed, to the status of a material resource to be used by other individuals. It passes from being a potential 'someone' to being a potential 'something', from within a kinship network to loss of all kinship status.

Mulkay's position bears some similarities to that taken by Marilyn Strathern. She states quite succinctly that, to her, the real debate has been over how to understand the IVF embryo: "How to think it, that is, make it real, became a matter for debate" (Strathern 1992b: 4).

Naturalization and Meaning

On an embodied level, the *in vitro* fertilized embryo comes into physiological and categorical existence while disconnected from a kin system, and only realizes its potential status as having kin upon successful implantation or birth. Conceptually, however, it is at this point of decision (as to which fertilized ova to implant) that an embryo may be formally and legally deprived of the potential for the realization of its potential kinship claims (Mulkay 1994:703).

The cultural belief that there is at least a conceptual if not fully 'real' kinship connection between an *in vitro* embryo and the individuals whose gametes formed it is a tenable one, as indicated by the case of Del Zio v. Columbia Presbyterian Hospital (1978). In this instance, a New York jury awarded a couple $50,000 for emotional distress resulting from a physician destroying the couple's frozen embryo without their permission (Robertson 1994:105). The legal system in this case recognized a strong claim on something which was not simply a microscopic tissue sample of a few cells, although obviously did not judge that any felony (i.e. murder of the couple's child) had taken place. The judge took a middle ground position, in that he avoided making any explicit statement as to the social or physiological meaning of the embryo. Rather, he based his decision to award compensation upon a recognition of the emotional distress the couple had experienced. Such a judgment serves implicitly as a recognition that their emotional distress was over a legitimate issue - that it was both appropriate and socially meaningful that they would grieve the destruction of the embryo - and not an unfounded over-reaction.

The issue of what constitutes a culturally and socially meaningful understanding of an externally fertilized ova brings to the fore the complicated relationship between those historically derived definitions of kin which are fully naturalized and axiomatic with those which have only recently become possible through biomedical manipulation. The possibilities of this second category have not been socially 'worked out' with any certainty, perhaps in part because doing so could involve untangling and perhaps making contentious the understandings of 'traditional' kinship which are often seen as based in biological fact.

Strathern notes that kinship systems are imagined by British non-anthropologists as the social arrangements which overlie or provide the cultural context for the ***natural*** processes of birth, procreation, developmental stages, etc. (Strathern 1992a: 17). That is to say, it is a hegemonic aspect of (British) knowledge that procreation is a 'natural' or 'a-cultural' process, whose facts are variously determined within the broadest socio-cultural contexts. Strathern further adds that this perspective informed much of British anthropological thinking about kinship until quite recently (Strathern 1992b:3-8)[4]. Strathern believes that anthropologists now commonly understand that what are taken as 'natural facts' are also cultural constructions (1992a:17). That the British public may be forced, by virtue of having to create ways to understand phenomena such as the IVF embryo, to rethink core cultural understandings as constructed and not simply 'natural', leads Strathern to decide to bring her studies of kinship home to Britain. The IVF embryo, in effect, challenges the 'taken-for-granted' status of British notions of naturalized dynamics of determining kin relations.

Kinship as a Conceptual Hybrid

Marilyn Strathern dedicates two texts to considerations of British kinship in the context of assisted reproduction (1992a; 1992b). In After Nature: English kinship in the late twentieth century (1992a), her central thesis is that the new reproductive technologies simultaneously challenge and endorse contemporary British middle-class cultural understandings of reproduction and kinship as mapping biological 'fact'. Her second book, Reproducing the Future: Essays on anthropology, kinship and the new reproductive technologies (1992b), is a collection of essays which Strathern wrote for various audiences while the *Bill for the Human Fertilization and Embryology Act* (1990) was being debated both in British parliament and in more public venues. Most of these essays consider how reproductive technologies create possibilities for reformulating British cultural knowings of kinship and conception. They simultaneously contextualize these possibilities as constrained by whatever cultural repertoire is drawn upon to imagine them - a point often demonstrated through comparative reference to Melanesian kinship practices. I will draw upon each of these texts, especially Reproducing the Future, in my discussion of the 'kinless' embryo.

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[4] This observation parallels my own regarding recent shifts in the approaches of medical anthropologists, as detailed in Chapter One, subheading 'Medical Anthropology: Biomedicine as Academic Territory'.

Strathern states that within British culture, "kinship systems and family structures are imagined as social arrangements not just imitating but based on and literally deploying processes of biological reproduction" (1992b: 3). There is thus the expectation, that that which is understood as the social aspect of kinship can be made to map that which is understood to be an *apriori* set of biological kinship facts. This leads to the subsequent expectation that the social relationships owed to (and from) the *in vitro* embryo can also be deduced from its biological status, in a manner which is satisfactory to British people. Such an expectation is confounded, especially when and if the domains of social and biological kinship do not exist or map as expected. The difficulty is compounded by the uncertainty which clearly exists regarding the basic nature of - and so how to talk about - the phenomena in question. Strathern observes that "we make fresh concepts by borrowing from one domain of life the imagery by which to structure other ideas" (1992b: 14), as exampled here in the borrowing of biological presumptions to structure social knowing. Thus, a central difficulty in formulating a culturally meaningful understanding of the disembodied embryo is determining whether to assign it the language of property or the language of personhood, for "it matters what ideas one uses to think other ideas with" (Strathern 1992b: 10). Each of these discursive/legal/moral domains has great implications, enabling the legitimation of very different interests.

Davis v. Davis, the 1989 through 1993 American case of a divorcing couple's fight over who would get ownership of their seven frozen embryos, exemplifies the issue extremely well in a grounded and lived context. Each of the three Tennessee courts who heard the case reached a different decision, dependent upon what social/biological and thus moral meaning they attributed to the embryos. (The U.S. Supreme Court was also appealed to in 1993, but as it supported the Tennessee Supreme Court ruling there was no hearing (Kimbrell 1993: 97).) In the first court, Mr. Junior Davis, the husband, wanted the embryos destroyed. He was desirous of not 'fathering' Mrs. Mary Sue Davis' children following their divorce - or anyone else's children, in the event that the embryos were donated. He argued that the embryos had the legal status of 'property' over which he had equal rights regarding their disposal and thus they could not be implanted against his will. Mrs. Davis, however, wanted to personally gestate the embryos, and birth and raise any resultant children. To achieve this end, she wanted the court to ascribe to the embryos the legal status of children, making the issue one of child custody[5].

The first court declared the embryos to have an equivalent status to that of unborn children, not marital property. The judge explicitly stated that he refused to consider as legitimate the possibility of a continuum from property-to-person. He declared that either something was a person or a thing, and that there could be no shifting between these categories. He therefore granted Mrs. Davis 'custody', as gestation - not destruction - was seen to be in the best interest of the embryos-as-unborn-children (Kimbrell 1993: 94-96). The Tennessee court of appeals overturned this verdict, judging that the embryos did not have the status of unborn children. It further declared - drawing upon Roe v. Wade - that embryos do not have the right to be provided conditions under which they could be born. This court declared them jointly owned marital property, which neither party could have implanted without the permission of the other (Kimbrell 1993: 96-97). The ultimate judgment on the issue was made by the Tennessee Supreme Court. It upheld the general conclusion of the court of appeal, that either parent could veto the embryos being implanted. However, the Supreme Court disagreed on the point of treating or labeling the embryos as regular property (Kimbrell 1993: 97). Kimbrell cites from the court statement given, justifying this final decision:

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[5] The details of this case became very complicated, as the divorcing couple shifted their positions as to who wanted the embryos and to what end with each hearing (e.g. when Mr. Davis' new wife was diagnosed infertile, he wanted her implanted with the embryos; when Mrs. Davis remarried, she no longer wanted the embryos for herself). What is relevant for my purposes, however, is how each court positioned the frozen embryos.

> We conclude that pre-embryos[6] are not, strictly speaking, either 'persons' or 'property' but occupy an interim category that entitles them to special respect because of their potential for human life.
>
> (Kimbrell 1993: 97)

This court proposed and in doing so created a conceptual/material continuum of person to property, a category of subject/object, as a way of dealing with or at least conceptualizing a phenomena which appeared to have characteristics of each. This acknowledgment of the indeterminate or 'betwixt/between' status of the out-of-body embryo reflects the very character of how debates over the 'new' challenge the stability of cultural categories.

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[6] Pre-embryo refers to embryos before they have developed a primitive streak (that is, are less than about 14 days old). It is discussed in the text which follows.

However, this decision was contrary to that proposed by the American Fertility Society (AFS). Their members, who testified as expert witnesses in the Davis case, argued against giving any special moral or legal status to what they label the 'pre-embryo', although acknowledge at least in theory that it is more than mere human tissue (AFS 1986: 31s). The AFS define 'pre-embryo' as "a product of a gametic union from fertilization to the appearance of the embryonic axis" (around 14 days after fertilization) (AFS 1986: vii), and 'embryo' as "the rudiment of the whole being that first appears in the second week after fertilization and continues to develop" (AFS 1986: 27s-28s). This distinction enables a justification for genetic experimentation upon the 'pre-embryo' which would be unconscionable if performed upon a human, or conceptually human, subject. It has been observed by physicians that the term 'pre-embryo' is self-serving for bio-genetic research groups and corporations. Some argue that it was invented to condone research, by creating a linguistically and thus differently materialized entity than that of the embryo . For example, Patrick Quinn writes that the term 'pre-embryo':

> ... has become popular with some authors and national reproductive biology committees...the word may have been coined **more for reasons of public policy concerning the moral status of the conceptus than for scientific reasons.**
>
> (1995: 833, emphasis added)

More directly scathing are remarks by Kelly, the editor of Nature, who published a commentary in Lancet where he described the invention and public deployment of the category 'pre-embryo' as nothing more than a "cosmetic trick" (1990: 116).

What is intriguing about both the shifting decisions in the Davis case as well as the contentious professional reception for such definitions as those proposed by the AFS, is that they reveal uncertainties regarding the status and meaning of the unimplanted embryo. They similarly indicate the urgent need to settle - at least for the moment - upon a way to understand them so that people who must make decisions regarding their welfare know the proper way to act. In both cases these uncertainties implicitly divulge that the biomedical authorities who created IVF embryos are not taken as the ultimate authorities to declare their nature, not by other physicians nor by judiciary bodies. Franklin comments upon this continuing search for solid ground, articulated in her statement that "in the process of formulating legislation [regarding the IVF embryo] ... a considerable concern continues to be expressed about how to establish a legitimate foundation for decision making and debate" (1995:323). One thing which is truly 'new' about assisted reproduction is new biological 'facts' coming about through biotechnology, which people are looking to legislation to codify into social 'facts'.

Strathern observes this trend in her consideration of British difficulties assigning kinship meaning to the various parenting roles made possible through IVF. An IVF baby could have a gamete mother, a gestational mother and a social mother, as well as a gamete father and a social father. What social meaning or responsibilities do or should each of these five individuals have to and from a resultant child? (1992b: 17-32). Strathern fails to consider here that the only totally 'new' role is when the 'gamete mother' is not the same as the 'gestational mother'. The terms 'mother' and 'natural mother', and 'father' and 'natural father' are already common - where 'natural' refers to a genetic connection , and mother/father refers to a social role which usually indicates a genetic connection as well. The crucial difference is really one of intentionality - the social parent is the one 'for whom' the child *is deliberately conceived*, regardless of genetic connection to the child, or social connections between those involved in the process.

Although I disagree with Strathern regarding the nuances of parental role confusion, I accept her observation that it exists and has no obvious answer. Strathern assigns such confusion to an unmet need to find a way to speak of or understand the kinship relationships which fit neatly into a naturalized discourse, the domain of the axiomatic. That is, in a way which is affirmed by existent hegemonic beliefs. She writes:

> The doubts [regarding parenting roles] remain real and point in one direction. Unless a relationship is grounded in some intrinsic or natural connection, then Euro-Americans are likely to think of it as artificial, and to be thought artificial is to be open to uncertainty. Reality must lie elsewhere.
>
> (Strathern 1992b: 30)

This comment recalls the discursive battle described in the previous chapter, where much of the contestation over the legitimacy of offering IVF treatment raged over whether a woman's desire to gestate and birth babies was 'natural', or if this trope was actually a tool for legitimating constraints on social opportunities to women.

The belief that social certainty ought to be derivable from biological meaning is evident in definitions such as those given by the American Fertility Society, where biological markers are taken to indicate the appropriate moral status of the disembodied embryo. This pattern is also seen in the British House of Lords debate regarding the Human Fertilization and Embryology Bill.

Strathern observes two general characteristics of the House of Lords debate regarding the status of disembodied embryos. The first is that speakers regularly shifted between the semantic domains of a cultural definition of a social entity (embryo as potential person), and of a natural, biologically defined material (embryo as cell), with a fluidity which implied the categories to be merged ones without a one-way causal relationship (Strathern 1992b: 140-41). Thus, although there was consensus that experimentation on human life was unethical, there was little consensus as to when one can recognize in a biological form the presence of a social one. Members of the House who were in favour of embryonic research wanted to draw a time limit for experimentation, a limit which could be validated by biologically derived developmental criteria. Those who felt any experimentation was wrong argued that the potential for humanity was inherent to any embryo regardless of its stage of physiological development (Strathern 1992b: 139).

A second characteristic of the debate was that no participant disputed the description of early cellular formation (Strathern 1992b: 141). Its factual basis was taken for granted and disputes centered around how to understand those biological facts. There was no questioning of the categorization, presentation and valuation of physiological data as being a social process in and of itself part of an institutional history of the privileging of a certain way of knowing within a specific cultural context.

Strathern comments on the meaning of the layering of critical inquiry (ideological dispute) about the nature of the disembodied embryo ***onto*** a non-critically positioned set of (hegemonically-true) premises. She argues that the result is a dialectic one, modifying both what is assigned to the domain of social fact (ethical) and to that of natural fact (biological). However, the biological maintains its position of being ***conceptually*** ever-prior to the non-biological (e.g. ethical, social), even though they are mutually modifying:

> The appearance of the primitive streak gives a new identity to the embryonic cells. But when each feature is also an element regarded as deriving from a domain of phenomena or expertise with its own conventions or character, the addition remains visible. It retains an irreducible character, one that rests on a prior differentiation or partitioning in the objects of knowledge. Ethical considerations, for instance, can be no more than grafted on to the understanding of scientific information. The result is a kind of conceptual hybrid - the character of one entity (biological information about human cells) modified by the character of another (ethical debate about the treatment of persons).
>
> (Strathern 1992b: 142)

The appeal of looking to the primitive streak as a relevant biological criteria is quite revealing with regards to Euro-American understandings of personhood. What is significant about the embryonic axis forming is that it differentiates the cellular matter - it makes the embryonic cells distinctive from one another. The potential for personhood is thus hegemonically connected to the notion of uniqueness, of ***individuality***. One can re-examine Strathern's comments on how members of the House of Lords argued either that the appearance of the primitive streak denoted the potential for humanity or that the developmental stage of the embryo was irrelevant for designating that potential. In each case, there was the recognition that with uniqueness came a semblance of humanity. The discrepancy was regarding what constituted sufficient individuality; a unique embryo or a unique embryo whose cells were differentiated.

Clearly all members of the debate believed that they were discussing the welfare of a person manifested through an externally created embryonic and thus 'defenseless' presence. The difficulty encountered in definitively mapping humanity onto a biological mass was a breaking down of the prescriptive expectation that social understandings of kinship and personhood were commonsensically derived formulations of biological reality, a reality which was accepted as inherently true as a matter of (hegemonic) faith.

The discussion of medicalization in the third chapter described it as a dialectical and transformative process, whereby it is often the case that a socially recognized experience becomes a medically knowable one. Sometimes this involves a discursive and institutional shifting from public to expert domains of knowledge, and thus from the perceived domains of social to biological reality. The process of formulating a culturally significant knowledge of the out-of-body embryo is only partially an issue of expressing it in medicalized or biologized terminology. As indicated by the above discussions of moral and legal status, it also involves the parallel and autopoetic process of naturalizing it into meaningfulness. This involves finding ways to place it or speak of it within existent or incipient cultural categories, other than those of medicalization.

Such a conceptual process is argued to have taken place in producing contemporary hegemonic Euro-American understandings of the fetus (Duden 1993). Duden positions the concept of 'fetus-as-life' as a recently invented idea mapped onto a previously unrecognized and thus meaningless biological state. This writing of the fetus posits it as virtually spoken and interpreted into being, and not in fact a common-sense and long-recognized developmental stage of gestation. An examination of Duden's argument provides a potential model for how understandings of new biological states (i.e. the IVF embryo) come to stabilize.

The Making of Meaning: The Case of the Fetus

The thesis of Barbara Duden's Disembodying Women is that the human fetus, as conceptualized today in Euro-American society, is not the natural fact which it is commonly positioned as being. It is, rather, a recently engineered construct of modern society which parallels certain ecological positions. She states that in this book:

> I want to examine the conditions under which, in the course of a generation, technology along with new discourse has transformed pregnancy into a process to be managed, the expected child into a fetus, the mother into an ecosystem, the unborn into a life, and life into a supreme value.
>
> (Duden 1993: 2)

Duden draws the elements of her argument together by tracing historical developments in the manner women (and physicians) have and do speak of and treat pregnancies in Euro-American societies. The medicalization of pregnancy is a theme to which she often returns. Duden takes as primary sources the treatment journals of 17th through 19C Western European physicians, as well as wood cuttings and other illustrations drawn by or for anatomists, of what one finds in the belly of a woman who was or who was thought to have been pregnant (these women, examined post-mortum, died late in their pregnancy). These she juxtaposes with her field research in family planning and prenatal counseling clinics, as well as current events and pop slogans.

Although Duden does not fully succeed in arguing some of her positions (eg. that mothers are currently understood as ecosystems), she does present strong arguments for the experience of pregnancy, and associated meanings of what it is in a woman's womb which makes her belly swell and her menses stop, as having changed radically in western Europe and North America, over the last hundred years in particular. A central concept for this argument is the role of the experience of 'quickening' - feeling movement in ones womb. Duden cites from 16th through 19th century physicians' journal entries indicating that a woman was only pregnant - as opposed to her being diagnosed as having some other internal growth or bloating - when the woman declared herself pregnant. Her pregnancy became a social fact specifically through her public announcement of having felt quickening in her womb (Duden 1993: 79, 94-95). If she did not feel quickening, she was not pregnant - even if her menses had stopped for many months and her belly had swollen. Any matter which her body expelled was a growth of some sort, not a miscarried fetus or child. Terms used by physicians and women patients to describe what we would call aborted or miscarried fetal material include 'blood curds', 'wrong growths', 'moon calves', 'false conceptions', 'moles' and 'singed blood' (1993:64-65).

Duden describes there having been little sense that anything expelled from a woman's body which was not a fully formed infant was in fact an infant or had anything to do with an unborn child if she had not felt and declared its quickening. It was common medieval

Western European knowledge that both women and men could develop internal growths from catching a chill or eating baked goods which had not cooled properly, and that, if one was otherwise healthy, the body would expel any such wrong growth (1993: 65).

Before quickening, a woman who induced an abortion had simply purged a growth - she was not pregnant. Following quickening, however, she had committed infanticide as it was an as-yet born child - not a fetus - which she had killed. It was extremely difficult to persecute women for this pre-birth infanticide, for only if the woman admitted that she had felt quickening - and that she had not found the quickening to be something else (i.e. it was a false quickening and so had stopped) - was any crime committed. Duden argues that the definition of the human fetus as a developmental entity distinct from a child and the criminalization of 'feticide' happened in lockstep with the exclusive legislative entitlement of the physician to engage in therapeutic abortion both in Germany (in 1871) and in Victorian England (1993: 60). It also appears to have co-incided with the term 'quickening' being dropped as a medically valid or publicly used term - physicians now had other ways which were not dependent upon the subjective experience of women to determine pregnancy (e.g. palpitation) (1993: 80).

By 1900, Euro-American physicians were listening for fetal heartbeats and giving x-rays. By the 1930s hormonal pregnancy tests were in use. With the 1960s came very fuzzy ultrasounds (originally developed as military technology for spotting and bombing submarines) (1993: 32).

It took more than the biomedical definition of a fetus as a meaningful life form which could be hormonally or sonographically detectable to make the concept a generally accepted one. Duden observes that "There are several steps by which a biological fact becomes a media image and then takes on bodily consistency as the experience of pregnant women" (1993: 72).

Duden isolates a vital episode in the making of the fetus as a highly meaningful life form in North America the 1965 Life magazine photo spread of a fetus. This was a series of images showing what looked to be a slightly distorted infant floating in a clear bubble. Duden argues that this image, and its accompanying narrative that these photos showed for the first time the start of life, holds in the public imagination a place similar to that held by photos of the planet earth taken from space in the late 1960s, also published in Life magazine. The narrative accompanying these space photos speak of earth as the source of life (1993: 11-19). Duden sees these images as feeding off of and supporting one another in generating a grandiose concept of life as ultimately symbolized both by the floating fetus as the start of all (human) life and the earth as a giant ecosystem, the source of all (known) life.

Duden thus argues for there having been a series of shifts in how pregnancies were understood, both by physicians and pregnant women as well as by the public-at-large. This is especially with regard to who has the authority to make the pregnancy a fact and the nature of what is taking shape in a woman's womb. Duden identifies this process as involving several biological redefinitions, the passing of legislation to enforce a shifting of authority (which reified the biomedical definitions), the development of several biotechnological instruments which bypassed and made medical knowing independent of women's subjective accounts, and mass media participation. Through all of this, biological and technological practices were the ideological source of the fetal image which would eventually come to be stabilized as a hegemonic public culture image.

Duden identified a similar process regarding pre-natal testing while doing research in prenatal centres in Harlem. Here her fieldwork indicated that the understanding of a fetus as a category of human development necessitating ultrasounds, amniocentesis, and concerns regarding the age of the mother were culturally and historically specific. Here she observed interviews between counselors and pregnant women with various ethnic backgrounds who had not been raised on images from Life magazine. The job of the counselors was to convince inner-city women, many of them recent immigrants from places other than Western Europe, to consent to prenatal testing of their fetuses. This regularly involved trying to argue the women into believing that they were carrying a fetus - something with meaningful and biotechnically knowable characteristics, whose current status was de facto in doubt as it automatically required medical testing (1993: 26-29), and not just an as-yet born child. The fetus is essentially different from an unborn child, whose unrealized characteristics could be known only as they manifested themselves by the child actually being born and growing up. Here the cultural apparatus of pregnancy counseling extended the bio-technological discourse into the lives of women of diverse cultural backgrounds, expanding the ideological reach of fetal imaging.

This is reminiscent of Rayna Rapp's findings, published in part in "Regarding Amniocentesis" (1993), reviewing her fieldwork in prenatal diagnosis clinics and laboratories in New York City. This research made her aware of competing discourses of what it means to undergo amniocentesis. It also alerted her to divergent meanings for a diagnosis of genetic abnormality, especially but not only for women of different cultural backgrounds. Some genetic counselors expressed the position that amniocentesis is a diagnostic procedure which all women would use if they understood its utility, and that medical experts are best placed to identify whether what they define as a genetically aberrant fetus ought to be aborted. Such counselors advised in a manner which supported these premises. These beliefs are accepted by some pregnant women but nonsensical to others. This is especially the case for those women whose (cultural) background is such that the expectation or understanding of social stigmatization due to certain physical or mental disabilities does not parallel those which geneticists or counselors isolate as significant.

A particularly telling passage is the description of a physical examination of a baby whose amniocentesis had shown it to have additional chromosomal material on the short arm of chromosome '9'. The mother had not aborted the fetus, against the repeated 'advice' of the counselors[7]. The clinic geneticists had predicted the child would have physical anomalies and some degree of mental retardation - the examination was to observe and take note of the nature of the birth 'defects'. Rapp describes the examination by Dr. Judith Schwartz, a geneticist trained in pediatrics, with the mother present as follows:

> Malve took notes as Judith [a geneticist] measured and consulted with Maxine [another geneticist]. "Note the oblique palpebral fissure and micrognathia", Judith called out. "Yes", answered Veronique [the mother] in perfect time to the conversation, "he has the nose of my uncle Hervé and the ears of aunt Mathilde." As the geneticists pathologized the mother genealogized...
>
> (Rapp 1993: 57)

In this passage there is demonstrated both a scientifically formulated medical description, as well as an alternative one which denies the validity of the meanings the geneticists inscribe upon the baby's features. Although each is meaningful, they are not equal in terms of broader power relations, given the different situatedness of the holders in the biomedical delivery system. Browner and Press (1995) argue that such 'resistance' is not very common. Their fieldwork on prenatal diagnostic screening in California lead them to conclude that most American women want and are in fact reassured by such screening, due in part to the positioning by women of pregnancy as "the ultimate risk" and so "they want clinicians to reassure them that their pregnancies are proceeding uneventfully and that they themselves are acting in an appropriately responsible manner" (1995: 309). That is, proving to both themselves and society at large that they are looking after their fetus:

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[7] Where Rapp's narrative indicates that the counselors could only explain the mother's choice to not abort as indicating her lack of understanding what they told her, and so contacted her repeatedly to redescribe their interpretation (1993: 55-57), it is not clear to me that 'giving advice' is really the nature of the interaction.

> ...once a test exists, whether a woman accepts it is not a neutral act: refusal carries the explicit rejection of technical expertise and implies a reluctance on the part of the expectant mother to do everything in her power to assure the health and well-being of her developing fetus.
>
> (Browner and Press 1995:320)

The work of Duden, Rapp, Browner and Press, which look at meanings ascribed to and through the in-body embryo and fetus, are useful for understanding the issues involved in negotiating and ascribing meaning to the out-of-body embryo. Each examine a biomedically created or defined phenomena (specifically the fetus and prenatal testing) in terms of contestation and historical specificity, as well as - either implicitly or explicitly - cultural specificity. Their work shows: i) the mobilization of biotechnology as ideology; ii) the translation of ideology into dominant ideology or hegemony; and iii) the contestations met along the way. Rapp does not consider the historical developments which take us to the present state of affairs, focusing rather upon the complexity of the current meanings of amniocentesis as revealed by her fieldwork. Duden, on the other hand, traces the historic emergence of a specific meaning, and its impact upon certain populations. It is clear in these works that cultural intelligibility of 'biological reality' entails the embedding of that reality into other domains, such as what makes someone a good mother.

In the case of emergent meanings of IVF embryos, a principal history to trace is that leading to the current privileging of biomedical views as the authoritative baseline for deriving intelligibility. This narrative and its discourses, as well as some of the specific narratives which purport to counter it, have been touched upon elsewhere in this text[8]. What Duden, Rapp and Browner and Press all consider at some level in their research is how some meanings come to be adopted and seen as 'commonsense' in certain populations while others do not. This process can in part be understood as the interplay of ideology and hegemony in the constitution of cultural reality.

Hegemony and Ideology

Hegemony and ideology are the two dominant forms in which power is entailed in culture, culture being loosely defined as "the semantic ground on which human beings seek to construct and represent themselves and others - and hence, society and history" (Comaroff and Comaroff 1991:21). Power is both agentive (eg. individual physicians currently have the power to decide who is allowed IVF treatment) and non-agentive (eg. biomedical knowledge of the developmental stages of an embryo which categorize when experimentation is ethically permissible). The non-agentive aspects of power may be more insidious, as they may not be experienced as power at all. Comaroff and Comaroff write that:

> They are internalized, in their negative guise, as constraints; in their neutral guise, as conventions; and, in their positive guise, as values. Yet the silent power of the sign, the unspoken authority of habit, may be as effective as the most violent coercion in shaping, directing, even dominating social thought and action.
>
> (Comaroff and Comaroff 1991: 22)

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[8] See Chapter Three, Part Two, for a detailed discussion of different positions regarding the 'meaning' of IVF vis-a-vi medicine as an institution of social control.

Comaroff and Comaroff take these two forms of power - agentive and non-agentive - as occurring both ideologically and hegemonically. Drawing most heavily upon the work of Gramsci and Bourdieu, they define as hegemony "that order of signs and practices, relations and distinctions, images and epistemologies - drawn from a historically situated cultural field - that come to be taken-for-granted as the natural and received shape of the world and everything that inhabits it" (1991: 23).

Ideology is definable as the shift in meaning which occurs when the hegemonic is somehow recognized as having limited thinking, speaking, or acting, for having bounded the rational or credible, and what had seemed so natural as to be ineffable becomes positioned as negotiable (Comaroff and Comaroff 1991: 23-24). The hegemonic, being axiomatic, can only 'go without saying' or be uttered as a truism, for when it is otherwise said there is the possibility of speaking it differently and in that very possibility is the blurring which positions a concept in the domain of ideology. Duden's research (1993) serves as an argument for how the fetus came to be materialized and hegemonically stabilized, to the point that to question its reality would be virtually nonsensical. By de-naturalizing this process and status, she creates space for ideological contestation and concurrently the recognition that social interests, as opposed to that which is logically necessitated by 'objective truth', are being served. As many social scientists have pointed out, however, the existence of awareness and questioning of the status quo does not necessarily lead to social change, but rather may result in a debilitating pessimism or else an acceptance of the status quo as a truism (eg. Martin 1987:200).

What one can isolate as ideology is what anthropologists have traditionally described as a cultural 'worldview' - it is what informants can identify and speak of regarding a society's practices; an articulated system of beliefs, practices, meanings and values. The ideology of the dominant group, unlike hegemony, may need some explicit form of enforcement (e.g. punitive, legislative), as by definition there is the possibility of multiple interpretations and thus contestation as to how something ought to be understood or practiced. The dominant ideology of a group will have strong cross-overs into hegemony as aspects become naturalized and orthodox, and so the relationship between ideology and hegemony is a fluid one, their borders in constant flux.

Biologically situated knowledge exists in the cross-over zone, fluctuating between being unrecognized as hegemonic and being contested as forming a dominant ideology in Euro-American societies. Meanwhile, what is categorized as 'social meanings' - by virtue of being recognized as socially-influenced rather than biologically determined - are more probably relegated to the zone shared by dominant ideology and counter-ideology. This is exampled by John Robertson's analysis of the status of the IVF embryo (Robertson 1994).

Robertson is a widely published and influential American bioethicist and professor of law at Texas University who served on the Ethics Committee of the American Fertility Society for several years. He is frequently called upon to testify as an expert witness for court cases regarding assisted reproduction and its 'side-effects'.

Robertson (1994: 99-114) grounds his discussion of the moral and legal status of the IVF embryo, as well as issues of ownership and experimental limitations, with the biological 'facts' of embryonic development. That biology ought to be an appropriate and meaningful basis for ethical considerations also formed an unspoken assumption in the House of Lords, as noted above. Throughout Robertson's analysis, he consistently returns to the biological facts with which he introduced the topic as a tactic to disregard certain moral or legal positions, which is to say that he takes as axiomatic (i.e. hegemonic) that biology is true, and as irrelevant any position which he does not consider as being derived from his selection of relevant biological facts.

For example, one position which he cites (1994: 102) regarding the moral status of the embryo makes it a full human subject *from the moment of fertilization*, in turn necessitating the provisioning of an opportunity for implantation and making any experimentation not directed at improving its likelihood of implantation unethical. My own critique of this position is that setting forth a biologically derived requirement in 'provisioning an opportunity' could entail the legal coercion of women to gestate such embryos. My concern is first and foremost the social consequences of such a position. Robertson cites only one reason for disregarding it: "[i]t's weakness is that it ignores the reality of biological development" (1994: 102). The only referent which he takes as valid or necessary for determining the moral status of the IVF embryo in this case is what is taken to be biologically proven. Robertson is suggesting here that morality can in fact be biologically derived. He will not consider biological knowledge as a cultural process, but rather as the ultimate baseline reality. A careful reading of his telling of biological development, however, reveals no explicit reference to when a subject could be said to exist, nor any biologically-based data which states that no subject could exist. The closest thing one can find are words used as developmental status reports - 'genome', 'zygote', 'blastocyst', 'pre-embryo', 'embryo', 'anatomically recognizable human miniature' - 'immature by all structural and functional criteria', and finally, 'newborn infant' (Robertson 1994: 101-102).

The reader is clearly expected to simply see these descriptive terms as antithetical to personhood, to automatically make the same judgments upon their meaningfulness that Robertson did, which is - one can only guess - that if a zygote was a person we would know through biological criteria that it was a person and label it as such. Robertson is operating in a zone where biological reality is incontestable except by new biological data and forms the only true basis for the sorts of social meanings under consideration.

He similarly (and somewhat circuitously) argues that embryos should have a legal or moral status as anything other than tissue sample only when the interests of what he calls 'an actual person' are at stake, and not for its own sake. What constitutes an 'actual person' is biologized by Robertson here as one which is individualized, with a "developed brain, nervous system, and capacity for sentience that legal subjects ordinarily have" (1994: 104). Given this self-serving definition of who counts as a person, it is hardly surprising that Robertson is able to conclude that "[t]he biology of early embryo development supports this legal status [as non-person]" (1994: 104). Robertson's position is tautological. He layers these notions of kinship and personhood, brought into existence through social relations and practice, as being always potentially derivable from what he takes to be the IVF embryo's real nature. This real nature he takes as biologically determined, definitionally outside of and independent of social interaction or cultural meaning.

Robertson's positioning of biological fact as truth from which or upon which true social meaning can be derived or layered is a rather common tactic - one could say that it is an ideological deployment of what is hegemonically stabilized. Emily Martin, on the other hand, takes biological reality as an extremely powerful, but still culturally produced and so contestable, narrative form. She writes that:

> ...the seemingly abstract code of medical science in fact tells a very concrete story, rooted in our particular form of social hierarchy and control. Usually we do not hear the story, we only hear the 'facts' and this is part of what makes science so powerful.
>
> (Martin 1980: 197)

Clearly the hold of biological interpretations as absolutely defining reality is not a fully hegemonic one, as they are sometimes contested. However, biology certainly has that flavour, given that it achieves much of its force by laying claim to the 'facts of nature' - a trope which is itself a hegemonic form. As described above in reference to the relationship between hegemony and ideology, a lack of hegemonic power may result in coercive or manipulative measures being taken to ensure social compliance with the dominant ideology. Thus, we see the right to informed consent before undergoing an ultrasound negated within Canadian medical practice[9]; we see women being argued into believing that they carry a fetus (Duden 1993); and pregnant women being told, by people paid specifically to do so, that amniocentesis is what any mother who is responsible and actually 'understands' the issues would consent to (Rapp 1993).

A flip-side to this coin is the sense of intrinsic correctness and thus ethical security of action which naturalized meanings can allow. The IVF embryo is under intense discussion because a satisfactory manner to map that which is assigned to the domain of the social to that of the biological has yet to be and may not be developed. This failing entails a renegotiating of the positioning of biological discourse. The supreme court hearing of the Davis divorce case, described above, chose to contradict Robertson's biologically-derived testimony/opinions in its findings, as well as those given by other members of the American Fertility Society (AFS). The court specifically disregarded the deployment of the biologically determined category of 'pre-embryo' as validly indicating an entity distinct enough from that of 'embryo' to legitimate these contingent categories as having different moral and legal statuses.

The researchers for the Warnock Report, though presented with similarly biologically justified data, were unable to reach a definitive conclusion on "when life or personhood begin to appear" (Warnock 1985: 60), deferring instead to using the primitive streak - a biological marker - as a line before which experimentation was acceptable, after which it was banned. Yet, as Franklin points out (1993:555), the 'natural facts' are insufficient to provide a clear boundary, as a specified time period (14 days) is substituted in their stead. She writes that:

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[9] See chapter three, subheading "Choice or Coercion", for discussion and references.

> This idiosyncrasy was commented upon in parliamentary debate - why include the primitive streak at all? **The rather vague rejoinder by the Minister of Health was simply that it was 'better' to have it in the law than not.**
>
> (Franklin 1993:555, emphasis added)

This is an example of utilizing biomedical definitions as a last resort, because of an inability to find a more satisfactory conceptual framework from which to consider the issues.

It is an anthropological truism that all cultures have stories which tell how people originally came to exist, as well as how human reproduction occurs, what counts as legitimate reproduction allowing us full personhood, and what the penalty is for illegitimate reproduction. Conception and reproduction stories also tell us who we are, how we are related to others, what our kin obligations are, and how we are situated in patterns of inheritance and descent. Franklin writes that:

> They are central to the acquisition of a specific cultural identity, to definitions of sexual difference, personhood, parenthood, and procreation. What a culture believes about conception, Malinowski argued, tells you what it believes about everything else. Conception stories are cultural cosmologies in microcosm.
>
> (Franklin 1992: 81)

People asked to make social policy on IVF embryos are implicitly being asked to consciously 're-conceive' conception stories, to find a meaning for them which appears legitimate in terms of other current cultural 'truths', and - if Malinowski was correct - captures the cosmology, which they know as reality, in a microcosm.

Assisted reproductive technologies, and the research which enables them, do entail shifts in the western narrative of human reproduction. It is no longer about sperm being released into vagina, swimming to meet an ova, sperm fertilizing the egg, implantation of the ovum, and embryonic division in utero. Even the idea of 'sperm fertilizes egg' has been broken down and subdivided into a long sequence of events, complete with a specialized vocabulary, fully accessible only to the geneticist or other biomedical specialist (cf. Franklin 1992). Those asked to do this re-conceiving for the public (instead of in the explicit interests of biomedical research such as the American Fertility Society has done) are finding the task an uncomfortable one and, as evidenced by the uncertainty described, find biological meaning as partially or wholly failing them in their search for ethical guidelines. There appears to be a lack of conviction that the biological position is adequate, that it truly can provide a one-to-one mapping of biological state to personhood. A boundary zone has been demarcated in the instance of the IVF embryo. Those policy-makers and judicial bodies who have had to pass judgments on the status of the IVF out-of-body embryo have thus had difficulty formulating a culturally intelligible meaning for it.

Part Two: Boundaries and Category Formation

Abjection, Social Marginality, Liminality and the IVF Embryo

Judith Butler's writing highlights as problematic the taking of the social as something which maps to or from the biological in her 1993 text Bodies that Matter: On the discursive limits of 'sex'. In this treatise on 'who counts' as a real person in North

American society, a society which she characterises as hegemonically heterosexual, she argues that 'gender' is not simply a series of social meanings imposed upon or derived from a fixed biological state known as 'sex' (i.e. that people with specific genitalia <biological sex> are treated like and expected to act in a masculine or feminine manner, but need not be <gendered sex>). Rather, Butler argues that gender is a mystifying term, allowing the concept of 'biological sex' - as inherently meaningful and determining in-and-of itself - to remain outside of critical discussion (1993: 2-3).

Butler takes the position that in current practice people are only socially recognized as real people if they themselves assume and are identified by others as having a [biologically meaningful] sex, that is, specifically and exclusively either male or female. This theory of performativity defines gender as the effect of discourse, and sex as the effect of gender. Butler argues that without this self-identification and identification by others one is not a culturally intelligible person (1993: 2-5). This leads to her addressing the following issues:

> ... [T]he question is no longer, How is gender constituted as and through a certain interpretation of sex? (a question that leaves the matter of 'sex' untheorized), but rather, Through what regulatory norms is sex itself materialized? And how is it that treating the materiality of sex as a given presupposes and consolidates the normative conditions of its own emergence?
>
> (Butler 1993: 10)

Butler's consideration of 'sex' is a contested one, nested in post-structuralist theory, which - though she has a specific political agenda which it mobilizes - can be reduced to a critique of biological meaning as a discursive practice with hegemonic or near-hegemonic power. It harkens to Lacquer's medical historical analysis (1990) of the Victorian shift from conceiving of humans existing as one sex with two genders to that of two sexes.

Lacquer documents pre-modern European writings where male and female bodies are positioned as inversions of a single morphological possibility defined by the positioning of the penis and testicles (interior for females, exterior for males). Lacquer points out that this did not preclude a binary gender system which attributed gender differences to organ configuration. However, he does create an argument that gender dichotomies can be and have been imagined in a variety of ways which are not reducible to those currently prescribed through biology (1990)[10].

What is potentially useful for my purposes is that these writings provide a possible model from which to approach an understanding of the IVF embryo and its status vis-a-vis personhood. If one re-writes the second half of the passage cited above, the resultant questions are "Through what regulatory norms is personhood itself materialized? And how is it that treating the materiality of personhood as a given presupposes and consolidates the normative conditions of its own emergence?" That is, how are discriminations formulated between those bodies that matter (i.e. have personhood) and those which do not (i.e. are undifferentiated human tissue unless an outside interest is asserted).

We have seen one set of answers to these questions in the writing of Robertson, whose analysis rests upon biologically derived developmental stages. Butler's work can be used to explicitly problematize Robertson's explanatory basis, by positioning biological reference as marked and formed by normative discursive practices whose regulatory force is evidenced by its power to demarcate, exclude, and differentiate (Butler 1992: 1-4). Butler's analysis of gendered or sexed bodies, like the work of Julia Kristeva (Kristeva 1982: 2-6), appears to take as a cultural universal that humans know through notions of opposition, where inclusion in a category is only meaningful because there is a meaning to being excluded: this does not mean that those things which are included are necessarily opposite to those excluded (Butler 1993: 15-16). To say that something is, for example, biologically true, is meaningful because there is an understanding of what it means for something to be socially true, or biologically untrue, or as theoretically possible. Biological truth is meaningful in opposition to these other sorts of truth, even though they may share conclusions. Such a position, of knowing meaning and creating categories through opposition(s), is not foreign to the field of anthropology, and is perhaps best known in structuralist theory (e.g. Douglas 1966; Levi-Strauss 1963; Levi-Strauss 1969).

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[10] See Chapter Three, Footnote 18, for a brief discussion of the naturalization of discriminatory Victorian values through the biologization of gender.

As described in the first chapter, Mary Douglas provides in Purity and Danger a seminal anthropological text for the understanding of ways in which peoples have and do draw meaningful boundaries within various cultural and historical contexts, especially with regards to body boundaries (i.e. what constitutes acceptable food to consume, what one should or should not do to or with ones or another's body, etc.). Where her text falls short for the purposes of this discussion, however, is in its not working with the gritty details of such category formation in the present-to-future tense. Her text deals with categories which have already been constituted and affirmed within and by cultural practices. The extremely complicated process of transition, where a non-category (the unknown or unthinkable or simply meaningless) comes to be known and meaningful and assigned a place in a dialectical continuum, perhaps of purity to danger, is left uninterrogated.

Within structuralist anthropology, one finds framing practices enabled by concepts of ritual, liminality, taboo and pollution. A notion which is not currently utilized by anthropologists, but which may be a useful contribution to this set of ideas, is that of the 'abject', as introduced in the lugubrious prose of Kristeva (1982) and deployed analytically by Butler (1993). Kristeva uses abjection within a tripartite approach to meaning, where she suggests that there is the subject, the object and the abject (1982: 1-2). The abject is what is not recognized as belonging to either of the categories of subject and object. It is what is understandable only in terms of being **excluded** from the categories of person or thing. Kristeva states, in an uncharacteristically concrete passage of writing, that "The abject has only one quality of the object - that of being opposed to I [the subject]" (1982: 1). Kristeva associates encounters with the abject as inducing fear and repulsion (1982: 5-6), and recognizes cultural taboos as associated with the abject (1982: 17).

However, the abject is not simply taboos, nor is the state of abjection contained within the term 'liminality' with which it also seems to share some meaning. Anthropologically speaking, liminality is an experience framed by ritual space, entered with intention and having a framework through which one is expected to pass and exit. Abjection does not necessarily have the sense of being transitory or of being a socially acceptable (even desirable) passage, but rather is a repugnant state of being particular to a certain time and place.

Mary Douglas considers the social status of people who are in what she calls a 'marginal state'. She writes that "[t]hese are people who are somehow left out in the patterning of society, who are placeless" (1966: 95). The specific example she draws upon to illustrate her concept is 'the unborn child', whose future, she writes contemporaneously, is ambiguous in that no one knows what sex it will be or whether it will survive infancy. This ambiguity she takes as sourcing its cultural positioning in several societies as simultaneously vulnerable and dangerous (1966: 95). She specifies that the character of ambiguity is that of transition, which is dangerous "simply because transition is neither one state nor the next, it is undefinable" (1966: 96).

I had originally conceived of the IVF embryo as existing - **for the people involved in deciding its fate** - in a liminal state, a conceptual zone of transition between becoming either (potential) person or property. I saw the confusion expressed by those who had to pass judgment as indicating their belief in these possibilities as potent ones, and the weight of making a decision regarding whether to assign it the fate of potential personhood or genetic research material. The concept of the abject offers a different possibility, which acknowledges the IVF embryo in terms of how it currently exists - not really object nor subject - as opposed to what it has the potential to realize; though I believe that both are significant in its cultural conceptualization.

Butler takes abjection as a way to describe the social positioning and meaning of people who are not heterosexual (i.e. are homosexual, pre-operational transgendered, post-operational transgendered, etc.) in a social milieu which she describes as heterosexually hegemonic (1993: 16). She asks the questions:

> How does that materialization of the norm in bodily formation produce a domain of abjected bodies, a field of deformation, which, in failing to qualify as the fully human, fortifies those regulatory norms?
>
> (Butler 1993: 16)

So Butler argues that the understanding and making of who counts, who is a real person, is made in opposition to who lives in a state of abjection and thus does not count as a real person. Duden's analysis of the fetus (1993) positions it as something which has been made 'to count' - a process facilitated by media imagery, protective legislation and biomedical definition - but which she feels should not count due to that status being coupled with pregnant women coming to 'count less', as their interests are played off against those of the fetus. Mirroring Comaroff and Comaroff's discussion of the interplay between ideology and hegemony (1991) described above, as well as Foucault, Butler positions 'that which counts' as historically and socially situated:

> These regulatory schemas are not timeless structures but historically revisable criteria of intelligibility which produce and vanquish bodies that matter.
>
> (Butler 1993: 14)

Butler further argues that the existence of the abject (in her text, those people who are not taken as having full personhood) challenges the hegemonic (the reference point which is taken as absolute). The abject thus has the potential to force a radical reinterpretation of "what qualifies as bodies that matter, ways of living that count as 'life', lives worth protecting, lives worth saving, lives worth grieving" (Butler 1993: 16). Parallels to proposals made within the out-of-body embryo debates are clear.

There are those who argue the embryo to 'count', and those who do not, at least while it is a 'pre-embryo'. As it is uncertain whether the embryo constitutes an object or a subject, it is unclear what responsibilities or levels of respect humans owe it. Assigning the embryo to the category of 'thing' runs counter to the social meaning people clearly already have for the IVF embryo. Including the embryo as 'potential person' necessitates redefining the category of who counts as a person, and implicitly serves to undermine the legitimacy of taking biology as naturally underwriting social kinship and personhood. Rather, it involves the explicit recognition that the domain of the biological and the social are not necessarily distinct, but rather **discursively created and dialectically sustained.**

It is clear that if successfully implanted the embryo has the potential to develop into an autonomous human being and thus is a subject. It is equally clear that the object of contention is a few microscopic cells. It is thus arguable that the IVF embryo is somehow both a subject and an object (rather tricky given the mutual exclusiveness of the terms) or both not a subject and not an object; what Butler and Kristeva would label 'abject'. The term 'abject', though enabling a useful understanding, is inadequate here due to its specific associations with fear and repulsion. Although such reactions are associated with IVF implantation possibilities (eg. the 'unnaturalness' of surrogate motherhood), they are not expressions specific to debate regarding the status of IVF embryos.

The recognition of an *in vitro* embryo as potential human or deserving the rights or respect believed to be owed humans is an explicit act of forceful imagining, supported by no previously recognized markers of humanity. There is nothing recognizably human - nothing that places it firmly into the contemporary category of culturally intelligible person about the cell sample. Advocates of '*in vitro* embryo rights', unlike pro-life/anti-choice activists, cannot produce any film equivalent of the "Silent Scream" - an ultrasound film of an abortion where the fetus' physiological human-like features were played up by the commentator drawing attention to its mouth opening and closing in 'a silent scream' of pain and horror. The conjured and imaginary - yet witnessed - screams serve to virtually call the fetus into existence as a human subject, to give the appearance and thus the experienced reality of the fetus demanding its recognition as human through its perceived ability to suffer as a human does.

Comaroff and Comaroff (1991) write about such acts, to make sense of and meaningful something which is or was culturally unintelligible, as characterized by 'inchoate awareness'. They place inchoate awareness, or partial recognition, upon a continuum of consciousness upon which social knowledge and experience are situated. This chain of cultural consciousness, running from the submerged to the apprehended, they take as approximately corresponding to the continuum between hegemonic and ideological. In the zone between conscious and unconscious they place the inchoate:

> ... that liminal space of human experience in which people discern acts and facts but do not order them into narrative descriptions or even into articulate conceptions of the world; ... it is from this realm, we suggest, that silent signifiers and unmarked practices may rise to the level of explicit consciousness, ... or from which they may recede into the hegemonic...
>
> (Comaroff and Comaroff 1991: 29)

'Inchoate' is a generally satisfactory way to conceptually situate the IVF embryo, as it has the characteristics described by the Comaroffs, which, unlike 'abject' do not assign it an odious aspect. It is this inchoate character which lends it to multiple and diverse possible meanings, the recognition of which entails the shifting of category boundaries. The lack of faith in biologically derived meaning as complete serves both as evidence of a shift in its status as near-hegemonic as well as fodder for further shifting.

Dislocation and Materialization

There are, therefore, several possible models and categories through which one can try to position the IVF embryo as an ***isolated*** entity, that is as being outside the social domain. It is similarly the case for the controversy surrounding public assertions of its meaning as (or not as) a potential ***social*** entity, where the assertions and their inherent negations serve to denaturalize or authorize different discursive practices and assumptions, ideologies and counter-ideologies. The IVF embryo, being an entity which cannot 'speak for itself' or otherwise direct or contest its own materialization, can only be ascribed meaning in terms of its positioning vis-a-vis the interests of empowered social agents.

All recognize in the IVF 'extra' embryo a powerful social signifier, its power enabled in part through its existence, as 'matter-out-of-place' which is the side-effect of directed and intentional acts designed to create a human infant. This intentionality in its creation allows for an easy association with concepts such as 'life' and 'family' to something which could be said to be a (bio-)technical 'left-over'.

The side-by-side negotiation of possible meanings which consider as being significant in the delineation of the IVF embryo (a) the social intentionality which informs its creation, and/or (b) its inherent social potentiality, serve to dislocate a biomedical claim on the embryo/pre-embryo as being within its domain of knowledge, even though the IVF embryo is arguably its creation.

As I have pointed out, in contrast to the IVF embryo the fetus was 'made real' biomedically in such a manner as to locate it, first, as a socially significant 'agent' to whom physicians have a special knowledge claim; and second, as a 'patient' accessible on certain levels, which are defined as highly significant, and only through biotechnologies (Duden 1993; Rapp 1993). The practically hegemonic public expectation to see the fetus as subject and patient is the result of social recognition brought about significantly by (a) legislation, for which physicians had lobbied, which legitimated the fetus as real by virtue of positioning it as something about which laws could be made, and (b) media imagery and visualizing technologies such as ultrasound imaging[11]. That is to say, it was made real (and also, thereby, medicalized) such that its liminal status (see discussion of Douglas 1966, above) was discarded **through a process of speaking and 'seeing' it into tangible and naturalized being**, which also gave it characteristics deemed relevant for knowing it as biotechnically discoverable. Unlike the IVF embryo, the fetus is thus culturally located within certain discourses which serve to naturalize these meanings.

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[11] See chapter three, subheading "Choice or Coercion" for discussion on some physicians (notably Fletcher and Evens 1983) recommending ultrasounds as a method for inducing a pregnant woman to recognize the fetus as a person and to hasten mother-child bonding.

The dislocation of the IVF embryo from the biomedical domain is not a complete one, however. This is demonstrated on a tangible level by the valuation and consideration given to biologically situated criteria as inherently true if insufficient (eg. Warnock 1985), and on a more philosophical level by the inability of people to know precisely how to speak of the IVF embryo, that is - 'to make it real' - without resorting to privileging biological criteria as the baseline upon which social meaning is inscribed (Strathern 1992). This tentative dislocation, without a culturally intelligible relocation, is partially describable and knowable in the terms of the IVF embryo as existing conceptually in a state of liminality, abjection, and/or within the discursive realm of inchoate awareness.

What can be seen to be in part at issue is the fear of making the IVF embryo, if it is in fact best understood as a person, an abject person by virtue of treating it as an object. Those asked to rewrite conception stories on behalf of the public (e.g. legislators, judges, juries) were conscious of the possibility, whether that consciousness was full or only inchoate is irrelevant, that their conclusions could lead to moral injustices. This sense was strong enough that the biological criteria (eg. that outlined by the AFS) - which if adopted as real and complete would negate such a possibility - were insufficient to assuage the fear. Having partially discarded biologically derivable criteria, there existed no **naturalized** guidelines to give confidence in the marking and therefore making of any one category as the true one, the one which allows people to act with moral fortitude.

There are multiple potential consequences, the most obvious among them being the IVF embryo slowly following the path of the fetus. It could become materialized and stabilized as subject or object; or continue to be contested. In either case this could entail it coming to be seen as a morally significant entity whose welfare is considered to be best determined on an 'individual' basis, by biomedical professionals.

Alternately, if the current trend continues, then one could expect 'reality' to continue to be defined through the social negotiations taking place in courtrooms. However, those called upon in the privileged position of 'expert witnesses' may be social science professionals, familiar with how biomedical criteria is conceived, as well as how the domains of the natural and the cultural are constituted and deployed within western society. They can offer frames for considering how intelligibility is negotiated, and what the interplay of legal authority, scientific authority, cultural categories, and public concerns might be. Where the technologically initiated emergence of new and indeterminate entities like the IVF embryo challenge the regulated systems of cultural categorization and consequent moral or legal inscription, biological means of ordering have shown their limitations - in effect, demanding that more socially-critical knowledges be mobilized in these arenas.

Chapter Five

In Conclusion: Just the facts, please

Within this document, I have striven to demonstrate that the refiguring of reproduction, kinship and the 'facts of nature', which necessarily follows from considering what assisted reproduction entails, benefits from being explicitly positioned in terms of its cultural dimensions.

I argue in chapter two that much of the consternation surrounding AI is located in a specific cultural vision. This vision, unlike that mobilized regarding 'traditional' Euro-American kinship, does not appear to be one grounded in the systematic privileging of either 'social' or 'biological' facts in determining who is kin or has kin obligations to an AI child. Instead, this vision predisposes adjudicators to prioritize whichever of these two possible foundations supports the position considered most in line with a hierarchy of naturalized social values. This is multiply evidenced though the discursive practices exampled by American and Canadian judicial proceedings, as well as British legislation. That every child needs a (male) father and a (female) mother is one such naturalized value. This value is, however, secondary to the naturalized value of a husband having the right to control his wife's fertility even if he himself is infertile and she strongly desires to birth a child. That is, a woman's access to AI treatment is often contingent upon her having a husband who will sign a consent form. AI without 'permission' is taken as the violation of the husband's 'rights' over those of the child. In such cases, the husband is not held accountable as a 'father' if he chooses to abdicate that role. If his consent was obtained, then he would be bestowed all the rights of biological paternity, even if he and his wife were to separate before the insemination. Thus the kin ideal sought is the reproduction of the nuclear family, by whatever route will allow it. The implicit limit of this, however, is that it will not be achieved at the cost of violating values regarding maritally sanctioned masculine claims over feminine bodies .

I would add that, while some values may constrain subjects by excluding specific possibilities, others assert an ethic of inclusion. One example is recognizable in the Canadian Charter of Rights and Freedoms. A cursory reading of the Charter indicates that no legislation may be passed in Canada which would selectively deny access to any 'medical procedure' on the basis of such criteria as marital status or spousal permission (i.e. that of one's husband). That is, the *lived* value as indicated through juridical and medical practice and discourse contradicts the simultaneously held *ideal* value as represented by the Charter. These multiple and conflicting cultural visions need to be interrogated if satisfactory policy is to be publicly negotiated. Inherent to this negotiation would be the explicit recognition of these sets of values as figurings of dominant ideology.

Also highlighted in chapter two, and again in chapter three, is the hybrid nature of medicalization. The objective status of 'medical procedure' is validated on a presumption of 'natural fact'. 'Natural facts' are those which are expected to be divorced from the domain of 'social facts' or values. In the cases discussed it is clear that no such distinction actually exists. Rather, it is precisely because assisted reproductive techniques constitute an authorized biologization of an otherwise 'social' experience that the grounds of the debate seem unable to be stabilized. For example, the claim is made to some women that assisted reproduction will fulfill their 'biological need' to mother. At the same time that this inherent 'need' is presumed and thus validated for some women, it is denied to others on social grounds.

I also arbitrated a tentative deconstruction of positions regarding IVF in chapter three. For the most part, these positions extend on-going debates regarding whether such social practices as medicalization are inherently antithetical to women's efforts toward social empowerment as a 'group'. I argued that although there is material supporting each position described, there is also an overall disjuncture between the perspectives of some women who personally sought out IVF as a treatment, and those women who undertook to write the critical analyses of IVF, a disjuncture dubbed the 'evil step-sister' phenomena by anthropologists McNeil and Franklin (1993:480).

I further criticized such readings as failing to consider the medicalization process as a responsive cultural practice. I argued it typical, but not necessary, that medicalization emerges dialectically, often in tandem with the agenda of a social interest group (eg. suffragettes petitioning for the hospitalization of childbirth). Such a designation may *later* be interpreted as oppressive and be judged to need de-medicalization. Alternately it may maintain its status as liberating and perhaps life-saving.

I recognize power differentials but refuse to endorse a simplistic framework that claims 'medicalization necessarily equals the oppression of women and the marginal'. My position is consistent with those currently held by some medical anthropologists who have performed long-term participant observation with medical researchers as well as lay people. The conclusions of such research contrasts with those often reached during the 1970s and 80s, where much fieldwork only investigated the 'patient's' position. A strong case in point is Emily Martin's participatory observation based analysis of the interplay between HIV activist groups, physician and medical research groups, and legislators (1995). Her research findings are in strong contrast with her earlier work where she only interviewed women in the role of patients (1988).

At the same time, I argued that offering IVF as a medical treatment was in itself a highly questionable practice given such factors as the uncertainties of how to perform the procedure, procedural 'side-effects' such as the requirement for fetal reduction, and low (or falsely advertised) success rates. This backgrounded my probing into the highly contested zone of what motivates women to utilize IVF.

In concluding the third chapter I argued that all of these variously endorsable and potentially spurious positions contribute to what IVF means and symbolizes. I similarly noted that the reduction of women's motivations for using IVF to the domains of exclusively either biological or social origins, with those social origins being either personal desire or a form of coercion/oppression, is an injustice. This discussion pointed to the sorts of issues which must be addressed if adequate and respectful social policy is to be developed.

My fourth chapter demonstrated the utility of anthropological analysis in making explicit some of the core issues at stake in the assisted reproduction debate, looking most in-depth at the contested status of the disembodied IVF embryo. It included discussion of the de-stabilization of 'natural' facts as something forced by assistance procedures. This occurs in part through the introduction of natural facts which are in actuality only technologically - not 'naturally' possible. This has necessitated legal recourse to determine which 'natural' facts are more important and should be given precedence in decision making. An inherent consequence of this, however, is that the 'natural' status of these 'facts' is contested and made ambiguous. This displacement is oxymoronic, creating a challenge to renegotiate a culturally more intelligible meaning. These issues were considered in terms of cultural processes of knowledge construction and category formation.

In summary, I demonstrate that AI and IVF, taken as 'whole' processes, are culturally intelligible and thus easily engaged. They fit into already existent discourses such as feminism, medicalization, the sanctity of marriage, the valuation of having children, etc.. Furthermore, for the public-at-large, they are understood in terms of biomedical purpose, as a biological 'solution' to a social or biological 'problem' with a bodily 'origin'. That is to say, the 'service' or 'product' (of having children) was already socially desired, and that desire taken by most as 'normal'. However, specific enabling aspects of such processes, such as the out-of-body embryo, do not readily fit into a clear continuum of intelligibility.

Butler, echoing Wittgenstein, writes that:

> ...the crisis in the symbolic, understood as a crisis over what constitutes the limits of intelligibility, will register as a crisis in the name and in the morphological stability that the name is said to confer.
>
> (Butler 1993:139)

The consternation surrounding how to name and thus know the out-of-body embryo instigates or registers a crisis in the stability of biological knowing. The nature of this crisis was explainable, in part, by considering the IVF embryo in terms of such matters as inchoate awareness, abjection, and the dialectics of hegemony and ideology.

In my positioning of all of these issues, I take the segregation of the domains of biological and social as one which potentially restricts understandings of larger cultural processes, especially with regards to knowledge of the natural as itself a socio-cultural process. Such a position laments the split described by Foucault (1973b) regarding the meaning of 'history'. He argues that studies of the biological world - the science of 'natural history' - and social studies of the human world - 'human history' - were once merged. Foucault maintains in The Order of Things that:

> Until the time of Aldrovandi [mid 1600s], History was the inextricable and completely unitary fabric of all that was visible of things and the signs that had been discovered and lodged in them: to write of the history of a plant or an animal was as much a matter of describing its elements or organs as of describing the resemblances that could be found in it, the virtues that it was thought to possess, the legends and stories with which

> it had been involved, its place in heraldry, the medicaments that were concocted from its substance ..... *The history of a living being was that being itself, within the whole semantic network that connected it to the world.*
>
> (Foucault 1973b:129, emphasis added)

The chain of selections which rejected such a perspective is obviously related to that which could see and speak a marking which wrote the body as an object of medical or natural knowledge, and the social the object of social science and humanities knowledge. This enables the image of kinship as having a symbolic and material basis in nature. The grounding of kin relations in natural fact gives with one hand, in that kin relations are bestowed with an axiomatic facticity, but takes with the other as this facticity is left contingent upon the stability of those base facts (cf. Strathern 1995:350).

Those 'base facts' have slipped, in part, because technological assistance entails both a conflation with, and a displacement of, nature. It is only because 'nature' is inadequate, in need of 'assistance', that such procedures can be argued to fulfill a need, or be necessary. Technology fulfills the role of nature, and in doing so there is a legitimation and naturalization - indeed legitimation *through* naturalization - of assistance to the reproductive process (Franklin 1993:540). The very concept of 'assisted biology' serves to de-stabilize biology as axiomatic. The (perhaps inchoate) recognition of biology as inadequate for providing a knowledge foundation for assisted reproduction marks the British parliamentary debate, especially with regard to how to signify the primitive streak.

That this slippage is threatening and resisted, by members of the American Fertility Society, for example, is hardly surprising. Franklin argues that "The sense of threat precisely indexes the importance of science as a source of cultural values that are deeply felt. Science is defended so vehemently because it is cultural, not because it is extracultural" (Franklin 1995a: 165).

Given the shifting in these 'base facts of nature', one can observe the tentative emergence of acts of re-stabilization. First, the 'natural' facts of biology can be seen as becoming re-signified, re-known in terms of what they can and cannot adequately describe, and, in turn, they may be re-positioned as socio-facts themselves. Secondly, those with the authority to formally codify kin relations (e.g. legislative and judicial bodies) can be seen as searching out a new and encompassing naturalized referent, one which incorporates the new 'facts of nature'. Such a referent needs to encapsulate historical 'kin' designations so as to ensure the cultural continuity which allows cultural intelligibility. In this sense, people are looking to legislative bodies to make definitive proclamations, to tell us what our conception stories are and can be. The stories of medical experts are not taken as adequate for this purpose, in and of themselves, but rather as one perspective among many to be considered.

I opened this thesis by asserting that it would substantiate anthropology's role in the possible re-figuring of assisted reproduction. This role for anthropology would not stop at academic exploration, but lead to legitimate contributions to the negotiation of public policy on these matters. In addressing this goal, I have managed to 1) isolate underlying discursive patterns of reasoning; 2) dissect certain positions in terms of their placement as cultural processes; and 3) offer ways in which to understand both the meaning of and the confusion regarding phenomena which dislocate the biological as an ultimate foundation of knowledge. This denuding facilitates critical engagement with issues of intelligibility, especially where axiomatic cultural premises are exposed as contestable.

Such an engagement is made fertile through the diverse sources upon which my analysis is based. Anthropology is quite generous in recognizing cultural phenomena and processes as constituted in and through innumerable sites, and thus approachable from many angles. I considered i) public media perspectives through newspapers, a source which essentially constitutes a public forum; ii) articles and correspondence in old medical journals, which facilitated my examination of historical change in values and attitudes; iii) feminist critiques which reflect various academic positions; iv) the position papers of a fertility research/treatment organization and one of its spokespersons; v) medical textbooks which allow access to 'inside' views and contestations; vi) governmental committee reports and recommendations; vii) judicial proceedings; viii) public opinion surveys; and ix) surveys of practices common to assisted conception clinics. I was able to take the discussion, observations and theoretical perspectives of other anthropologists on assisted conception or similar topics as spring boards for my own considerations, as well as draw upon the work of other social scientists.

Clearly, my investigation would have benefited from original research through participant observation and primary interview data. Such material would have allowed me to take a step further in my analysis, and made my writing far richer. Although secondary sources allow for generalizations and good historical contextualization, as well as something to deconstruct and react against, they are by nature rather limited and limiting.

However, the disparate elements which I drew together and from which I formed a story, or series of stories, do provide vital insight into the phenomena of assisted reproduction. They are all part of the cultural fabric in and through which assisted reproduction is experienced, known and practiced. This engagement thus offers ways to begin to know how and upon whose body, and with what terms, such cultural processes are materialized and made real.

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